MANCHURIA TODAY

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KINNEY

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INTRODUCTION

THIS volume is designed to present briefly the principal features of the economic situation in Manchuria, with special reference to the activities and aims of the South Manchuria Railway Company. The first chapter contains a resume of the outstanding events of the past few years. The remainder of the text is largely the same as that contained in the booklet, "Modern Manchuria" which was published in 1929, though this portion has been revised, especially in the matter of statistical information, so as to bring it as fully up-to-date as possible. Most of the illustrations are new.

As a semi-government institution, the South Manchuria Railway Company is one of the most important factors in the advancement of Japan's aims and policies in Manchuria. These are, not colonization or political control, but the development of the abundant resources of this rich, hitherto only partly settled territory, and its consequent increase in population and purchasing power. Japan is especially interested as Manchuria is a contiguous country which may furnish her with the raw materials which she needs for her industries, and with a market for her manufactured goods; but in these all nations share, and the greatest measure of benefit redounds, of course, to the Chinese.

The South Manchuria Railway Company is thus much more than a mere transportation system operating for profit. Besides providing Manchuria with a highly efficient railway and having assisted the Chinese in building railways of their own, the activities of the Company include numerous functions which contribute materially to increase agricultural and industrial production and commerce. In addition, it spends great sums on education, hospitals, sanitation and other such enterprises for the benefit of the population generally, from which no financial returns may be expected. This book is designed to show how Japan came to enter Manchuria; how working from a very slender beginning she has contributed in far greater degree than has any other agency towards bringing the benefits of modern civilization to an almost primitive region; what her aims are, and what are the means for carrying them out; and how this Company serves as the principal instrument in this great undertaking.

HENRY W. KINNEY,

Dairen, September, 1930.

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RECENT AND CURRENT EVENTS

ALTHOUGH Manchuria is usually spoken of as a sort of Flanders of the Far East, these provinces have, as a matter of fact, for the last quarter century enjoyed greater freedom from the ravages of war than has almost any other large area in China, the only cases in which actual warfare has taken place on Manchurian soil being the Kuo Sung-lin revolt, in 1925, and the Sino-Soviet conflict in 1929, and in both of these cases the fighting did not penetrate far into the provinces. While the famous war lord, Chang Tso-lin, during whose rule the principal development of Manchuria took place, did not always follow the principles of modern political science, but provided what was virtually a purely Chinese system of government, it was possibly because of this very fact that the results were successful. The outstanding fault of Chang Tso-lin's rule was his constant participation during the latter part of his rule in political and military affairs in China Proper. It is estimated that Manchuria exports roughly one-fifth of her agricultural produce, with the result that each year sees the influx of a large amount of silver paid in return for these exported goods. Through a system whereby the government banks issued paper money with which they bought agricultural produce, which they in turn sold for silver, the producer got the paper, which rapidly depreciated in value, and the Government the silver, of which enormous amounts were wasted on Chang Tso-lin's futile political adventures south of the Great Wall.

The New Regime—During the summer of 1928, Chang Hsueh-liang, commonly known as the "Young Marshal", succeeded his father upon the latter's tragic death. The outstanding feature of the new regime was the immediate decision of the Young Marshal to refrain from further participation in the turmoil which breaks loose periodically in China Proper, so that the funds which during his father's rule had been wasted in warfare, might be employed for the internal development of the provinces, a policy which was strongly upheld by Chang Tso-chang, Governor of Kirin, who is second in importance as a political figure in Manchuria. At the time of writing this policy appeared to have been abandoned when large bodies of Manchurian troops took over the Northern China provinces.

While it had been feared that the death of Chang Tso-lin, whose strong hand had for years preserved the unity of the provinces which constitute Manchuria, might cause disintegration of this unity, such an unfortunate contingency was, fortunately, avoided through the selection of Chang Hsueh-liang as the successor of his father. Whatever uncertainty existed came to an end by the death of Yang Yu-ting, who was shot some time later by the Young Marshal's orders in the famous yamen built by Chang Tso-lin in Mukden; for, while Yang Yu-ting was without doubt one of the strongest and most intelligent officials in Manchuria, and his death was regretted by many who admired his abilities, the situation which had been created by the death of Chang Tso-lin was to some extent complicated by a fear that the ambitions of Yang Yu-ting might lead to trouble. The relation of Manchuria to the rest of China was determined by the

decision of the Mukden Government to acknowledge the sovereignty of the Nanking Government, the flag of which was hoisted, while Chang Hsueh-liang accepted a position subordinate to Nanking. While technically Manchuria is thus an integral part of the Chinese Republic, the relation between Manchuria and Nanking was rather platonic in nature. Manchuria remits the customs funds collected within its boundaries to Nanking, consults Nanking with regard to various questions of foreign policy and the like, makes a showing of carrying out its orders, and has contributed several officials to the government in Nanking. On the other hand, it may be pointed out that Manchuria turned a deaf ear to the orders and entreaties of Nanking that it furnish military assistance against the troops of Yen Hsi-shan and Feng Yu-hsiang, when these war-lords and others initiated their campaign against the Nanking Government, and while the famous arsenal in Mukden contributed munitions of war to Nanking, it must be noted that these were well paid for. When the Manchurian armies were engaged in conflict with the forces of Soviet Russia, no assistance was received from the Nanking Government, and while this has been explained as being due to the fact that the latter was unable to contribute armed assistance, as it was itself engaged in a great civil war, the belief was general in Manchuria that the Mukden Government would not have greeted the arrival of large Nanking armies in Manchuria with any overwhelming enthusiasm.

Sino-Soviet Relations — The conflict with Soviet Russia in 1929 was a culmination of the rivalry which

had existed for some years between the Soviet interests and those of the Chinese for the control of the Chinese Eastern Railway, in which the ownership is shared by them. For several years preceding the break the Soviets predominated whenever Manchuria was in a weak position through its participation in warfare south of the Great Wall, while, on the other hand, when the Manchurian authorities felt themselves to be in a strong position, they attempted to add to their control the C. E.R. functions. The climax came through a raid on the Soviet Russian Consulate-General in Harbin, where a number of arrests were made, and the ousting of several high Soviet-Russian officials from their positions in the C.E.R. Actual war was never declared, but the Soviets gradually brought military pressure to bear, and, after numerous clashes on both the eastern and the western borders, Soviet Russian forces penetrated as far as Hailar and a protocol was signed by the Soviet Russian and the Chinese at Habarovsk, which provided the settlement of certain questions, more especially such as concerned the C.E.R. administration directly, and provided further for a conference to be held at Moscow in January, 1930, when further arrangements should be made. The Moscow Conference, at the time of writing, has made no progress, but the Soviet Russian officials appear to be satisfied with the status quo attained as far as the C.E.R. is concerned, with only one major exception, while, however, they insist upon the taking up by the Moscow Conference of a larger scope of matters than the Chinese appear willing to discuss. The Chinese have indicated that they wish to make a main point of definite arrangements for the purchase by them of the

Soviet interest in the C.E.R., though this question remains a purely academic one at present, as Soviet Russia will insist on an extremely high figure which China under the existing economic conditions is unable to pay.

Partisans, Communists and Bandits — The one exception in which the Soviet Russians are dissatisfied with the existing conditions in the C.E.R. area is set forth in their claim that the Chinese side has not kept its promise, embodied in the Habarovsk protocol, to control White Russian anti-Soviet agitation and to take action against the leaders thereof. Soviet Russia also points out that a number of large bands of White Russian partisans are interfering constantly with Chinese Eastern Railway property, of which Soviet Russia, of course, owns a considerable interest. These bands, which are well organized and armed, occasionally attack buildings belonging to the railway and the employees, but even Soviet officials admit that the Chinese authorities are eager to eliminate these bands and that their failure to do so lies in their inability to round up these very mobile forces which can easily elude the Chinese troops in the vast territory north of the railway line.

In spite of various rumors to the contrary, Soviet Russia has not demanded the right to employ its own guards on the C.E.R., though it claims that the protection now afforded is inadequate. As a matter of fact, interference by bandits and somewhat similar organizations with railways in Manchuria is fairly widespread. The Peking-Mukden line has suffered from some attacks by bandits, while the newly constructed line from Kirin

to Tunhwa has been fairly seriously interfered with by combinations of Korean and Chinese communists and bandits. The South Manchuria Railway property has suffered from no such depredations, though constant vigilance is necessary as quite occasionally stones and other obstructions have been placed on the track and railway property, such as telegraph wire, stolen. The conditions above referred to illustrate the necessity for the maintenance of Japanese armed guards in order that the S.M.R. may continue to maintain its record for safe and uninterrupted service. The Japanese troops stationed in Manchuria number only about 7500 men, which is about half the number provided for in the Sino-Japanese Agreement of 1905. These troops are maintained in Manchuria owing to the necessity as described above. They involve a heavy expense which Japan will undoubtedly be glad to avoid when sufficient order shall have been provided in Manchuria to render their presence unnecessary. It should be added that while banditry is fairly widespread in Manchuria, with the exception of the partisan groups in North Manchuria and combinations of communists and bands, in the Chientao district in Eastern Manchuria, the bandits of Manchuria usually operate in small groups, which attack small settlements, and Manchuria has nothing resembling the huge communist and bandit armies which operate in the rest of China. In many cases banditry is merely an avocation of the otherwise peaceful farmer who indulges therein when opportunity presents itself or when work on the farm is slack and he has nothing else to do. The communist depredations in the Chientao district are engaged in by both Koreans and Chinese,

and are, at least to some extent, directed by agencies outside of Manchuria. While they are troublesome, there is no reason to believe that the Chinese authorities will not be able to prevent their operations from assuming really serious proportions.

Japanese Policies and Interests—Japan's policy in Manchuria may be outlined in two brief sentences: Japan intends to maintain her rights and privileges secured by treaty. Japan has no ambitions in the way of political control or territorial aggression in Manchuria. In spite of many rumors in the past, though such have, fortunately, during recent years practically ceased, except on the part of a few definitely anti-Japanese writers, Japan has during the quarter century which has passed since the Russo-Japanese War, built no railways for herself, nor has she added to her territory except, in a very minor way as, for instance, in the case of the Fushun and Anshan mines, through purchase and regular agreements through which China received a definite quid pro quo. The elaboration of her interests in Manchuria has been brought about by improvements provided within her own area and, of course, through participation in commerce and industry in Manchuria generally. Japan is eager to establish cooperation with the Chinese, as it is evident that by such means the development of Manchuria can be facilitated and, as a matter of fact, it is to the interest of all who have the welfare of Manchuria at heart that not only Japanese capital but foreign capital generally should operate in Manchuria so as to develop and make available to the world the rich resources found there. Sino-Japanese cooperation

has, however, during recent years been little in evidence outside of oratorical courtesy, owing mainly to the fact that the Chinese generally regard Japan with suspicion in the belief that she is likely some day to take steps which will infringe upon the political and territorial integrity of Manchuria. The so-called "positive policy" which was heralded in the Japanese press a few years ago, contributed to this feeling on the part of the Chinese, but, as a matter of fact, this was merely a political slogan used for party campaign purposes at home, as was proved by the circumstance that Japan did not take any aggressive steps whatever. Under the present cabinet, as is well known, a very definite point has been made of Japanese friendship to China, and every possible measure has been taken to bring such about. For instance, Japan is eager to carry out the construction of a railway line from Tunhwa to the Korean border which would provide the only remaining link necessary for the completion of a railway system extending throughout the greater part of Central Manchuria from west to east and reach the Korean coast, where a port would then be built which would bring North Manchurian products to Japan by a shorter route than exist at present. Manchuria is important to Japan mainly because its raw materials may be used for the building up of Japan's growing industries, while at the same time the population of Manchuria affords a market for Japan's finished products. Japan is the best customer for Manchurian products, and since a port on the Korean coast would shorten the sea voyage by approximately 400 miles as compared with Dairen, it would have the obvious advantage of delivering raw materials and

Kwantung Government Offices, Port Arthur.

Russian Goods Train before the Russo-Japanese War.

Nihonbashi, Dairen, in 1904.

Nihonbashi, Dairen, in 1930.

First excavation made by the Russians in the neighborhood of site of the present Dairen Station. The Bluff, which is the Site of the Business Section today, was leveled by the Russians as far as the Central Circle.

Photo of Old Chinese Painting of Newchwang (Yingkou) showing Settlement as it appeared soon after the Port had been opened to foreign residence and trade.

Mukden Station during Russo-Japanese War.

S. M. R. Station, Mukden.

finished products to their respective destinations so cheaply that both Manchuria and Japan would be benefited. Japan has for a number of years held agreements with the Chinese for the construction of the above mentioned line and has, as a matter of fact, paid a considerable sum in advance on the basis of these agreements; still, as the Chinese oppose the construction, the Japanese have for some time past not followed up their negotiations on this matter in order to avoid causing irritation and suspicion on the part of the Chinese.

Japan's interests in Manchuria have therefore been entirely along economic lines. The last few years have seen a continuation of her developments such as the installation of a huge plant at Fushun which produces oil from the oil-shale found at the coal mine there; the building of an additional large blast furnace at the Anshan Works; construction of a great coal dock, at the cost of over ¥11,000,000, in Dairen Bay; many other harbor and other improvements at the port of Dairen, including a grain elevator, the first of its kind in Manchuria; continuation of the double tracking of the entire main line from Dairen to Changchun which will soon be finished, and various other improvements. The city of Dairen is growing rapidly and the number of new buildings, particularly residences, grows on apace. It may be noted that amongst the most elaborate residences recently constructed are those built by the numerous Chinese political ex-leaders and other Chinese men of wealth who are finding sanctuary in Dairen.

While the development of Manchuria from an almost unknown and sparsely settled region with which the world in general had only such very scant contact as

was furnished through the small port of Newchwang (Yingkou) and the Russian traders along the Amur, into its present position where it is the only considerable part of China where peaceful development on a large scale is taking place, was due, of course, originally to the initiative of the Russians through the building of the Chinese Eastern Railway and its branch to Port Arthur, and subsequently, on a still greater scale, to the activities of the Japanese exercised principally through the South Manchuria Railway Company as their chief instrument, the last few years have been remarkable through the fact that there has been a very considerable activity along various lines of effort onthe part of the Chinese themselves.

Chinese Build Railways—Until a few years ago, practically all modern construction in Manchuria was accomplished by the Japanese through developments effected principally in their own area, as well as through the building of railway lines for the Chinese (which were then turned over to Chinese management) by means of Japanese loans and with Japanese engineers in charge, and in a lesser degree through the activities of the Russians as part owners of the Chinese Eastern Railway. When, however, the effort of Kuo Sung-lin to overthrow Chang Tso-lin, in 1925, was almost successful through the fact that the Heilungkiang troops were first prevented from traveling to Chang Tso-lin's aid through the closing of the Harbin-Changchun section of the C. E. R. by the Russians, and when these troops only succeeded in reaching the front, where they turned the tide of battle in favor of Chang, by making their way south over the then only partly completed Taonan-Anganchi railway,

the Manchurian authorities came to the conclusion that it was essential that they obtain railways entirely under their own control, which would connect the three capitals, namely, Mukden, Kirin and Tsitsihar. Consequently, the Mukden-Hailungcheng and the Hailungcheng-Kirin lines, which established railway connection between Kirin and Mukden, were built, as well as the Tahushan-Paiyantala line, which, though in a round-about way, establishes a purely Chinese railway connection between Tsitsihar and Mukden. It may be noted parenthetically that Japan protested against the building of the Kirin-Hailungcheng and the Tahushan-Paiyantala lines as violating the Sino-Japanese Agreement of 1905, whereby China undertook not to build in Manchuria any railways which would parallel or compete with the S.M.R. The protests were made mainly for the reason that Japan felt that she could not allow violation of the Agreement to proceed unprotested, as otherwise a precedent would have been established, which might lead the Chinese to indulge in further violations. These protests have not been followed up.

Motives for Construction—It will thus be seen that while the leading motive behind the building of these first railways by purely Chinese initiative and with Chinese funds and engineers, was principally strategic, the lines, especially those between Kirin and Mukden, have considerable economic justification. Furthermore, the construction of these lines was participated in both by government officials and by private interests, and as the former found such undertakings very profitable to them, largely through the buying up cheaply of lands

through which the railways would pass, railway construction immediately became a very popular thing. This led to what may be considered as the second phase of Chinese railway construction in Manchuria, whereby lines were built for mainly economic purposes. This refers, for instance, to the line from Hulan, immediately north of Harbin, to Hailun, which has served to open for settlement a very productive area; and the line from Tsitsihar to Koshan, which is now under construction and of which a section is already in operation.

The third phase of Chinese railway construction is now principally in the planning stage and includes a large number of lines proposed by various persons. While, owing to the unfortunate economic conditions prevailing for the moment in Manchuria, these projects are at present mainly in the paper stage, it seems certain that when better times arrive some of them will be carried through. Some of these lines are proposed by the Commission of Communications for the Four Eastern Provinces (the addition of Jehol adds one to the original Three Eastern Provinces), others by provincial authorities, and still others by chambers of commerce, guilds and other private interests, while many are combinations of both private and official factors. The purposes behind these proposals are mainly economic, though some of them are based mainly on strategic considerations and others on the desire to strengthen the Manchurian administration and further its penetration into Eastern Mongolia.

Port at Hulutao—An impetus to the desire on the part of the Chinese to build railways has been furnished by the construction of a port at Hulutao, on the western

coast of the Gulf of Liaotung, which, after various vain attempts during the past, has finally been actually undertaken through a contract with the Netherlands Harbor Works Company, an efficient Dutch firm which has much successful construction along this line to its credit. The formal opening of the project took place in July, 1930, and the work is now being carried on. The contractors are to be paid a total of G$6,400,000, this being furnished from the proceeds of the Peking-Mukden Railway line and payable in instalments of G$ 95,000 a month. The British Government has filed a protest against this on behalf of British creditors of the P-M Railway, whose claims have been neglected for some time.

The port construction work is to be completed within about five years, and numerous plans have been suggested for the building of a network of railway lines which are to bring produce to Hulutao. Some of these aim to penetrate into the regions west thereof, while others contemplate penetration throughout the entire length of Manchuria from north to south, one set of lines to run from the north-eastern corner to Kirin, whence they will connect with the already constructed lines from that point to Hulutao, while another proposal contemplates lines reaching from Taheiho to Tsitsihar, where they will connect with already existing lines, though a more direct route may be established by the building of still further railways. Numerous other plans have been proposed for opening up many others sections of Manchuria.

As has been stated, the principal object appears to be to bring about the carrying of Manchuria's exports and imports over purely Chinese lines to a purely Chinese

port, but in view of the fact that the natural topographical conditions of Hulutao are such that it will not be practical to build a port which can be more than about two-thirds the size of that at Dairen, and owing also to the fact that it will hardly be economical to carry goods originating in regions far distant from Hulutao to that port, which will be further removed from the world markets than are either Dairen or Vladivostok, there does not seem to be any reason for undue anxiety that the competition to be furnished by Hulutao is to be feared, especially since, with the constant inflow of Chinese immigrants into Manchuria, the output of products is increasing at so great a rate that there should be more than enough traffic to keep all the ports and railways more than busy enough. In fact, if the Hulutao hinterland be developed by railways as has been proposed, it is likely to furnish so much traffic that the restricted facilities of the new port will not be able to handle more than a limited portion of the Manchurian export total.

Extension of Influence—While the principal purpose behind the railway construction planned appears thus to be mainly economic, the lines penetrating into Mongol territory will have the additional advantage of extending and consolidating Manchurian control over these regions. For some years past Chinese immigrants have been working steadily westwards, establishing communities which bring into cultivation lands which have heretofore been used only as pasturage by nomad Mongols. As this Chinese penetration advances, the Mongols usually pick up their yurts and move with their flocks further

westwards into the vast open spaces of Mongolia, although a few of them remain, adopting Chinese fashions and dress, and become agriculturists. When the Chinese pioneers have occupied a section, the Manchurian Government usually makes an arrangement with the Mongolian princes, whereby it takes over the administration and pays the princes a certain portion of the taxes collected. The new railway now being constructed from Taoan (a point slightly north of Taonan) to Solun furnishes an excellent example of this peaceful penetration, which serves gradually to increase the economic value of Manchuria and to extend the influence of civilization. Some of the other railways which have been built or are being planned will, in addition to serving economic purposes, have the advantage that they will improve administration in the areas which they penetrate and cause better order to prevail, as it has been found that the bandits, who infest large areas, usually move away or noticeably decrease their activities wherever the railways penetrate. The defeat suffered by the Chinese in their conflict witn the Russians last year is usually ascribed by the Chinese to the superior advantages held by the Russians, especially the fact that the Russians possess a railway paralleling the entire northern and eastern borders, and some proposals, most of which are, however, indefinite at this stage, purpose to provide Manchuria with similar advantages through construction of certain lines.

Other Chinese Activities—While railway construction may be regarded as the most essential factor in the development of Manchuria economically and in establishing

the various functions of modern civilization there, the past few years, even before the death of Chang Tso-lin, showed a greatly increased activity on the part of Chinese in providing, usually with their own funds, various other modern improvements, especially in the cities. Thus, since the Chinese took over the administration of the municipality at Harbin, great improvements have been made in street and side-walk construction, a tram system has been built, a water-work system is now in process of being established, and other improvements have been carried out. Kirin City has also been improved considerably, and even the old Walled City of Mukden has been given a much more modern aspect through the widening of streets and the building of fairly large structures.

While Japan may well claim the credit for having done the principal pioneering work in establishing the various factors of modern civilization in Manchuria and in making possible the subsequent development thereof, as will be shown in some detail later, the Chinese have profited by the example which she has furnished and are busily making their own additions on the foundation thus furnished. Unfortunately, while the Chinese profess to welcome foreign investment, capitalists from abroad have met with little practical encouragement owing to the fact that conditions remain such that safety of investment on which foreign investors insist, is not usually provided. Sales of locomotives and other railway equipment, which in the past constituted a very large item in foreign trade in Manchuria, has, with comparatively few exceptions, largely fallen into the hands of the Czecho-Slovakian Skoda Works, which is willing

to allow far longer credit terms than others will agree to. Quite considerable business has been done, however, in the sale of motor vehicles, largely of tractors which are being used in the opening of the wide, uncultivated areas in the North which are now being brought into cultivation, and of various machinery. The past year has, however, seen a fairly general economic depression in Manchuria, this being due to some extent, though hardly to a highly important degree, to the damage caused in the course of the Sino-Soviet conflict, but in far greater measure to the fall in the value of silver, which has affected all of China, and to the lack of demand abroad and low prices prevailing for soya beans, which form the principal export staple of Manchuria. Owing probably largely to these conditions, the emigration of Chinese from North China into Manchuria has decreased fairly noticeably, but all these conditions may be regarded as merely a temporary phase which cannot affect the general advance of Manchuria, as the fact remains that here are found vast areas of uncultivated but extremely fertile land which furnish an opportunity for a livelihood and a peaceful existence for the many unfortunates who populate large portions of China Proper, where famine, overcrowding, banditry on a large scale, and warfare must make them strongly desirous of emigrating.

Future Prospects—While Manchuria during the past year has suffered to a considerable extent from economic depression, such as is a fairly common phenomenon throughout the world at this time, no region in China, and probably few in any other part of the world, has as much reason to look forward to the future with

confidence as has Manchuria. While the future of China Proper is clouded by the possibility of constantly recurrent political uncertainty and turmoil, the situation in Manchuria appears to be definitely stable, at least as long as Manchuria refrains from fighting south of the Wall. Japan's policy of opposing disturbance of peace in the great areas of Manchuria in which she is interested has contributed towards the constant progress of these regions in the past, and there does not seem to be any reason why it should not be equally successful in future. Some foreign writers have a fondness of depicting Manchuria as "The Balkans of Asia" and as the field of another world war, but it would be difficult to find any intelligent resident in Manchuria who shares this fear. In such a war, the nations which would be involved, at least in the beginning, must be Japan, China or Soviet Russia. The very decisive results of the recent conflict between China and Soviet Russia would seem to indicate that no repetition thereof should be likely, and that if another clash should occur it would be of extremely short duration and of no far-reaching consequences. China is certainly not in a position to engage in warfare with Japan, and is not likely to be so for many decades to come, and as Japan is eager to develop friendship and trade relations with China and has no thought of war with that country, war between these two nations is unthinkable, at least for a long time to come. Soviet Russia and Japan have, ever since the Russo-Japanese Agreement of 1925, improved their friendly relationship. Neither country can have anything to gain but would inevitably lose much by war, so that war between these two nations, at least

within the next couple of decades, seems out of the question. Certainly if the possibility of future wars is to be discussed there are many other areas in the world which offer more likelihood of armed conflict.

Manchuria, as has been stated, possesses immense areas of fertile and uncultivated land and various rich timber, mineral and other resources, while within a few hours journey by ship or train are millions of industrious Chinese who are only too eager to settle in Manchuria and add their activities to its development. The picture of Manchuria as contrasted with China Proper tells the story. The former with her constantly growing population, building of railways, ports, factories, town improvements, etc. and with her fairly certain absence of civil war, certainly presents a vivid contrast with China Proper, where destruction of railways and other means of transportation, ruin of cities and thousands upon thousands of square miles of agricultural country and communities by civil war, banditry, and communist activities present but small hope of avoidance of, at least, some degree of disturbance in future, while such developments as have taken place are certainly not commensurate with what might be expected in this day and age from the activities of over 400,000,000 people. One may be justified in saying that Manchuria may serve as a model for the rest of China and as the basis for hope of a bright future, as it has shown and is showing what may be done on Chinese soil if only peace, order and efficient means of transportation are provided.

GEOGRAPHY AND CLIMATE

MANCHURIA, also now known as the Four Eastern Provinces of China, Jehol having been added recently, includes the area stretching from the Amur River to the Yellow Sea and the Gulf of Liaotung. Siberia and Korea meet its eastern boundary, while the boundary between Manchuria and Mongolia, on the west, is rather indefinite, moving steadily westwards as the Chinese agriculturists penetrate into Mongolia. As a consequence the extent of the area is uncertain, and the estimates given by various authorities differ considerably as no accurate surveys and no comprehensive census have been made. The following figures are probably the most reliable approximation:

Province	Land Area in Sq. Mile	Population	Population per Sq. Mile
Liaoning *	70,679	14,470,600	204
Kirin	92,778	8,592,200	92
Heilungkiang ..	224,950	4,965,600	22
Jehol **	60,550	4,500,000	74
Total	448,957	32,528,400	72

* Formerly Fengtien Province.
** Formerly Special District of Jehol and Part of Mongolia.

Province	Land Area in Sq. Mile	Population	Population per Sq. Mile
Kwantung Leased Territory	1,337	862,662 *	644
S.M. Railway, Area (Outside Leased Territory).....	101	337,314	3,340
Total.....	1,438	1,199,976 **	834

* At the end of July, 1929.
** Besides the above table, under Consular jurisdiction, population 42,578.

The regions known usually as "South Manchuria and Eastern Inner Mongolia" lie between 170 deg. 50 min. and 135 deg. 20 min. E.L., and between 38 deg. 43 min. and 53 deg. 30 min. N.L. Thus Dairen, for instance, lies in the same latitude as Athens and San Francisco, but as Manchuria has a "continental" climate the winters are far more severe than are those at the other points mentioned. An idea of the climate may be formed from the following table of mean temperatures (centigrade):

	Dairen	Mukden	Changchun
April	8.9	8.1	5.8
July	23.4	24.3	22.8
October	12.8	9.0	6.2
January	−4.3	−13.0	−16.4

The rainfall is rather scant, the averages being between 600 and 700 millimeters. The rainy season occurs mainly in July and August. The snow-fall is light.

The principal mountain ranges are the Great Khing-an on the north-west and the Changpai on the southeast, while the principal rivers are the Liao, Sungari and its tributary, the Nonni, the Yalu and the Tumen. These waters were, until the advent of railroads, the main means of transportation for the great, fertile valleys where is produced the wealth of Manchuria, and they are also employed for bringing timber from the mountain forests.

HISTORY

UNTIL the Manchus took Peking, in 1644, and established there the dynasty which ruled over China and Manchuria until 1912, these two countries had been bound by no connection and had, in fact, engaged in intermittent warfare. During this dynasty Manchuria suffered, as the flower of its manhood was drained to fill the ranks of the Banners, which formed the backbone of the Manchu rule in China, and farms and villages were abandoned. Furthermore, the Peking Government would allow no Chinese to immigrate into Manchuria, and although thousands managed to enter by stealth, and even to form communities at various points and later to have their presence recognized to a limited degree, the restriction remained more or less effective until 1905, when it was nullified by the Mukden Military Governor. Today it is estimated that of the total population of Manchuria more than 90% are Chinese.

Manchuria was opened to foreign trade in 1860, when Newchwang (Yingkou) was made an Open Port.

Advent Of The Russian—In 1894 the Sino-Japanese war was fought, its origin being due to a dispute over Korean affairs. This was fought mainly in Manchuria and resulted in an overwhelming victory for Japan, and a peace treaty was concluded at Shimonoseki (April, 1895) by which China, among other things, ceded to Japan in perpetuity all the territory south of a line drawn from the mouth of the Yalu to Newchwang. Russia, Germany and

France intervened, however, and advised Japan "in a spirit of cordial friendship" to give up this concession which it was contended "would jeopardize the peace of the Far East." Japan complied, and shortly after the ratification of the treaty an Imperial Rescript commanded the return of the ceded territory.

Russia demanded, however, a heavy price for her aid to China, obtaining from her, in 1896, the concession to build the Chinese Eastern Railway across North Manchuria so as to shorten the line to Vladivostok. In 1897 Germany seized Kiaochow and in December of that year Russian warships occupied Port Arthur and Talienwan (Dairen). Count Witte opposed this, but once Russia was committed to a policy of aggression, he did his share. He claimed to have bribed Li Hung-chang, who had charge of China's foreign affairs (see Witte's Memoirs), and an agreement between China and Russia was signed in 1898 by which the latter obtained the lease of the Liaotung Peninsula for 25 years, while subsequent agreements made during that same year allowed Russia to build the branch line from Harbin to Port Arthur and Talienwan (Dairen) and granted her certain timber and mining rights.

Russia immediately began to make Port Arthur what was believed to be an impregnable fort. At the same time the Russian forces throughout Manchuria were increased and by the close of 1899 Russia had 20,000 men at Port Arthur and Dairen alone.

Causes Of War—Russia took advantage of the Boxer trouble, in 1900, by placing large bodies of troops through-

out Manchuria and hoisted the Russian flag over and occupied Harbin and Newchwang. These troops remained, though continued "assurances" that they would be withdrawn were given owing to the remonstrance of Great Britain, the United States and Japan. The forming of the Anglo-Japanese alliance (1902) served, however, to restrain Russia somewhat and in that same year she signed a "Convention of Evacuation" with China by which she undertook to withdraw her troops in three successive stages, the entire withdrawal to be effected within eighteen months. This was not carried out, and after a while additional troops were sent in, while fresh demands were made on Peking which virtually excluded all foreigners, save Russians, from trade in Manchuria, and again Great Britain, America and Japan objected. Subsequently, in October, 1903, Mukden, Antung and Tatungkou were declared open as Treaty Ports through treaties between China and the United States and Japan, in spite of strong Russian objections, but they were not actually opened until 1906.

At the same time Russian influence had increased in Korea, since 1896, especially with the army, and continued pressure was exercised on the Korean Government for control of taxation and the customs. The Russians also gained great timber and other concessions in which the Czar and members of his court were financially interested, and Russian policy in Korea and Manchuria became complicated through the fact that one faction, headed by Witte, favored a purely economic and peaceful policy, while on the other hand the concessionaires, who enjoyed the Czar's favor, and other high officials favored aggres-

This Chinese graveyard was the site on which the Japanese built the Railway Town in Mukden. A certain sum was paid for each grave which was removed.

Modern City, Mukden, built on the above site.

Dairen Wharves.

Main Wharves, Dairen.

Main Wharf Office, Dairen.

Main Wharf Passenger Pavilion, Dairen.

Shipping of Bean Cake, Dairen.

Shipment of Bean Oil, Dairen.

Chinese Junk Wharf, Dairen.

New Coal Wharf, Dairen.

Great Central Circle, Dairen.

Bird's eye view of Dairen.

sion, and troops were sent to the mouth of the Yalu in July, 1903. In August, 1903, the establishment of Amur and Kwantung as a vice-royalty marked the victory of the party favoring an aggressive policy, and Witte resigned.

Russo-Japanese War—Japan has always been keenly aware of the danger of Korea being used by any enemy as a bridge by means of which she may be attacked, and she had long followed a policy of demanding that Russia live up to her treaty agreements in respect to Manchuria; so she approached the Russian Government for an understanding on Manchurian and Korean affairs. Japan contended in favor of the territorial integrity of China and the enforcement of the Hay "Open Door" doctrine to which Russia had, as a matter of fact, agreed, though reluctantly. Russia, however, could not be brought to agree to Japan's proposals, and, after lengthy negotiations and evasions, Japan realized the futility of her attempt. She broke off diplomatic relations and declared war on February 10, 1904.

The completeness of the victory of Japan over Russia, both on land and at sea, surprised the world. In the battles of Liaoyang, Shaho, and elsewhere, the Russian armies under General Kuropatkin were defeated and driven northward. Port Arthur fell after a long and sanguinary siege, on New Year's Day, 1905. A heavy defeat was administered to the Russian army at Mukden, March 10, and about two months later, the Russian navy, which had been sent from the Baltic, was defeated in the Tsushima Straits by the Japanese fleet under Admiral Togo. The Russian armies continued to retire northwards.

Various Treaties—Through the mediation of President Roosevelt, a peace conference was held at Portsmouth, New Hampshire, which resulted in the conclusion of a treaty, September 5, 1905, by which Russia transferred to Japan her lease of the Liaotung Peninsula and the railway as far north as Kwangchengtzu, as well as her various rights appeartaining thereto. This agreement was confirmed, in December, 1905, by China which also agreed to open to foreign trade and residence a number of additional cities in each of the three provinces. China also gave Japan the right to maintain and improve the light military railway between Antung and Mukden which had been built during the war by the Japanese troops, though Japan had to spend a large sum to purchase the right-of-way from the Chinese owners. China also agreed not to construct any lines paralleling of prejudicial to the S.M.R. lines.

In 1910 Japan and Russia signed an agreement to maintain the *status quo* in Manchuria and to cooperate in the development of the respective railway lines.

Subsequently the Treaty of 1915, between Japan and China extended the former's lease of the Liaotung Peninsula and the railway to a total period of 99 years, which is the term usually stipulated in most foreign concessions in China. The treaty also allowed Japanese to lease land in Manchuria and Mongolia. This treaty, which has become widely known under the name "The Twenty-one Demands," caused a great wave of strong, and in some respects justified, sentiment against Japan. It must be emphasized, however, according to Dr. Payson

Treat, " that the American Department of State, after a careful scrutiny of the Japanese demands and in the light of information received from our representatives in Peking and Tokyo, informed Japan that in respect to sixteen of the demands it was not disposed to raise any question. These included the demands regarding Shantung Province, for which Japan was so roundly denounced in the United States four years later, and regarding South Manchuria and Eastern Inner Mongolia." As a matter of fact, " the American Department of State, after a careful scrutiny of the Japanese demands and in the light of information received from our (the American) representatives in Peking and Tokyo, informed Japan that in respect to sixteen of the demands it was not disposed to raise any question. These included the demands regarding South Manchuria and Eastern Inner Mongolia." (Dr. Payson J. Treat in " Our Asiatic Neighbors," based on " U.S. Foreign Relations " volume for 1915). The demands to which objection had been raised, were subsequently withdrawn. The attitude of Great Britain was indicated by a statement by Sir Edward Grey to the House of Commons to the effect that no reason for protest had arisen. (Dr. Paul H. Clyde's work, " International Rivalries in Manchuria," also throws much light on this phase of Manchuria's history.)

During the past few years, the South Manchuria Railway has been the only railway in China which has functioned uninterruptedly and entirely efficiently, while other important lines have been subjected to frequent and lengthy interruptions, breakdowns, and even partial destruction. The fact that the S.M.R., under Japanese

control, has been able to carry on cannot but be of great benefit to the industry and trade which it serves, both Chinese, Japanese, and foreign. This was well illustrated in the fall of 1925 when Japan, though she did not bring the number of her troops in Manchuria above 8,000, kept her lines clear of the conflict raging between the troops of Chang Tso-lin and those of the rebel, Kuo Sung-lin, a circumstance which was greatly appreciated by all the business men of Manchuria of all nationalities. In fact, the foreign merchants of Manchuria readily admit that without this efficient service of the S.M.R., commerce in Manchuria would be very seriously impaired.

JAPANESE ACTIVITIES AND POLICIES

TO the world at large Manchuria represents a vast area capable of furnishing it with immense quantities of agricultural, forest, mining and other products. In its relation to the world Manchuria is a new country. Thirty years ago it had only one, relatively unimportant; Open Port, Newchwang, through which its foreign trade was conducted. Since then this country has been opened, first by Russian activities; then by Japanese development; and eventually by the activities of the Chinese railways have been constructed which make possible utilization of enormous tracts of heretofore unproductive lands of marvellous fertility. During the last twenty years the population has increased from 12,000,000 to probably over 28,000,000. Modern industries have been established on a large scale where a few decades ago only the most primitive production methods were employed in a very limited way. And still the resources of Manchuria have not yet been even half developed. The march of progress continues apace. Chinese immigrants arrive in great number and open new lands. New railways cause the settlement of new regions. New industries spring up. Production increases, and the number of people who are able to derive a livelihood and prosperity from Manchuria becomes greater with each passing year.

The greater share of the credit for this contribution to civilization may be claimed by Japan, which, after the Treaty of Portsmouth, in 1905, took over the only partially developed and principally military Russian

enterprises in Manchuria and embarked on the policy of economic development which has made Manchuria the most prosperous and peaceful region in China. In this work the South Manchuria Railway Company has been the principal factor.

Not Conquest, But Development—The activities and aims of the Japanese in Manchuria have from time to time been the object of suspicion and misapprehension abroad. While Manchuria maintains strategic importance to Japan, until such time when China shall have developed the strength to defend these regions, as her first line of defense in case of continental atrack; still, by far the principal reasons for Japan's interest and her ambitions in Manchuria are economic and easily understandable. There is no question of conquest, nor even of colonization on a large scale. From the very beginning Japan decided to work out her future by means of industry and commerce —not by war. She must make the money which she needs to pay for the foodstuffs which she must import to feed her rapidly increasing population. She will do this by developing her industry and commerce. In these days of strenuous world competition, she must seek the markets where she may enjoy the greatest natural advantages. These lie principally in eastern Asia, and Manchuria furnishes one logical field. Thought of conquest is out of the question for many reasons: It would be contrary to Japan's established policy of peaceful cooperation with the other Powers, of which she gave a significant demonstration at the Washington Conference; it would cause a hatred of Japan on the part of all the rest of China which must result in the loss of a most important

and promising market—so the game would not be worth the candle; and it has been conclusively demonstrated that Japanese employed in a small way as farmers, small merchants and the like cannot compete with the Chinese, whose standard of living is much lower and whose energy, patience, and thrift are inexhaustible. Finally, political administration would be financially ruinous to Japan, as, to bring about and maintain order such as exists elsewhere under the Japanese flag, would involve maintenance in Manchuria of large armed forces involving an expense justified by no commensurate compensation, as Japan already has access to the Manchurian raw products. The revenue received from the 1400 square miles of territory which she now controls, are far from sufficient to meet the expense of administation of this area.

So Japan must seek to gain from Manchuria by assisting the Chinese to develop the country and by showing them the way. This she has done and is doing by building railways, by showing them better farming methods and by finding new markets and processes by which the utility and value of the products are increased. As a result Manchuria is becoming in rapidly increasing degree a vast storehouse of the raw materials which Japan needs for her industries at home. It is also becoming a greater market in which Japan can sell her manufactured goods, as the buying power of Manchuria increases with the increase of population and with the prosperity of the inhabitants.

A Civilizing Force—To some extent Japan has profited directly from her activities in Manchuria, through

profits from railways, mines, and industry and commerce, but, on the whole, the results have as yet been far from commensurate with the money and effort expended, and this is largely due to the fact that Japan's principal instrument, the South Manchuria Railway Company, regards itself as a civilizing force rather than as a mere commercial enterprise for profit, and devotes huge portions of its earnings to cultural and eleemosynary work, by building and maintaining numerous modern schools, hospitals and the like which can yield neither direct nor indirect financial returns. The value of this is, however, greater than that which it intrinsically represents, for it serves a valuable purpose by instructing the Chinese in the arts and means of modern civilization. An example is being provided which the Chinese are showing greater and greater inclination to follow, as is shown by the constant improvement of their own towns made through their own efforts. If the freedom from war which Manchuria has enjoyed, with but few serious interruption for over twenty years, continue, it is certain that this region, which was until recent years considered by the inhabitants of China Proper as a wild and barbarous country, will become to them on a magnificent scale a demonstration of what may be done in the rest of China, an example which it will be well to follow.

Political Position—Thus the aims of Japan in Manchuria are preponderatingly economic; yet the strategic considerations cannot be overlooked. Japan is well aware of the fact that if dangers shall ever threaten her, such are most likely to develop on the continent of Asia. For centuries the Japanese have known that potentiality of

peril exists in the geographical position of Korea, "the dagger pointed at Japan's heart," and the strategic necessity of keeping that peninsula free from danger of hostile occupation is indisputable. It is thus to the interest of Japan, both for economic and military reasons, that Manchuria remain peaceful and undisturbed in Chinese hands. Whoever governs Manchuria is relatively unimportant, so long as such rule be strong enough to maintain peace and order. The misconception current abroad that Marshal Chang Tso-lin was a virtual puppet of Japan could not but be amusing, and a little galling, both to the War Lord of Mukden and to the Japanese. The assistance which he gave Japan as a leader of an irregular cavalry force during the Russo-Japanese war has been appreciated, as has also the fact that he had been strong enough to keep war from invading the Three Eastern Provinces and has thus made it possible for industry to develop in a way which has been impossible in the greater part of war-torn China Proper. The government presided over by his son, Marshal Chang Hsueh-liang, has also maintained an entirely independent attitude. The Manchurian government has given Japan nothing for which it has not been generously, often over-generously, paid. A healthy and laudable nationalistic spirit has been developed which prompts the leaders in Manchuria to wish to undertake the work of development themselves, where they are able to do so. In fact, far from "taking orders" from Japan, the Manchurian government often stands in the way of the realization of Japan's ambitions, as, for instance, by refusing to allow Japanese to lease land, although this right has been assured by treaty. It is the policy of the Japanese

Government, however, to remain on terms of friendly cooperation with those who rule Manchuria, and to assist them, as far as this may be done without encroaching on the principle of non-interference with internal affairs of China. A strong, forward-looking government of Manchuria is to the best interests of Japan. The portion of Manchuria which Japan actually controls—the Leased Territory, with about 1,300 square miles; and the Railway Zone, of about 100 square miles—is infinitesimal when compared with the total of about 384,000 square miles which comprise the Three Eastern Provinces. Japan's military force in Manchuria is small, some 7,500 men, though by treaty she has the right to station double that number there. In view of the widespread operations of bandits, often in large bands which attack even small towns, this force, as has been shown, is by no means over-large. Japan at first had a naval station at Port Arthur but she now maintains no naval establishment there.

The development of Manchuria's resources, accompanied by an increase in its population, which will become prosperous through wresting rich products from a hitherto largely idle soil, is the aim of Japan in Manchuria. This will give her raw materials for her factories, and the great hordes of immigrants from Shantung and Chihli who settle as pioneers in Manchuria every year, then rising from impoverished coolies to prosperous farmers, are creating an increase in the world's buying population from which not only Japan, but all commercial nations will benefit. An auspicious beginning has already been made. Merchants of many nations are already operating

and profiting from the great work of civilization which is being carried on and for which Japan, and her principal instrument, the South Manchuria Railway Company, may justly claim the greater measure of credit.

THE SOUTH MANCHURIA RAILWAY CO.

ON September 5, 1905, Japan entered into possession of the rights and properties formerly held by Russia in Manchuria. Besides the lease of territory, these consisted mainly of the railway between Port Arthur and Changchun, with comparatively light rails, poor grades, and no rolling stock; the town of Port Arthur, which had been badly damaged in the siege; a mere nucleus of the City of Dairen and a less than half-constructed and rather shallow harbor; and four very small railway towns along the line. From this modest beginning she built up the efficient and modern railway system, the large and flourishing railway towns, with their hospitals, schools and hotels; and made Dairen the second port in China in point of volume of direct foreign trade.

On June 7, 1906, the South Manchuria Railway Company was established through Imperial Ordinance, to manage the railway and the railway area, as well as the many allied enterprises which gradually became attached thereto. It was capitalized originally at 200 million yen, of which the Japanese Government took over half of the capital stock as payment for the property which it turned over to the Company. The rest was offered for public subscription. It was not regarded as a good investment by the public which had seen the Russian Government pour into this enterprise million after million without profit, and the Chinese, to whom Japan offered the privilege of taking over any part of the stock offered for public subscription, declined the offer flatly. It was,

however, regarded by the Japanese, whose patriotism had been thoroughly aroused during the war, as a patriotic enterprise. The shares were over-subscribed 1,066 times, and today only Japanese own such, with the exception of a few shares held by Chinese employees, and they have enjoyed the agreeable surprise of receiving good returns on their investment. In 1920, the company increased its capitalization to 440 million yen, the Government again taking half by taking over two bond issues, of 6,000,000 pounds sterling each, floated in the London market. Of the remaining shares 160 million yen have been subscribed by the public, and the remaining sixty million yen remain unissued.

The Government General of Kwantung was established September 1, 1906, and in April, 1919, the Kwantung Government Office was made to take over the civil administration and policing of the Leased Territory and the Railway Area. The Governor is also charged with supervision of the South Manchuria Railway Company. The officers of the latter are a President and a Vice-President, both appointed by the Japanese Government with Imperial sanction, and a Board of Directors appointed by the Government from among the shareholders. The company employed (March, 1930) 8,223 officials, 2,848 assistant officials, 23,219 employees, and 322 persons not on the regular staff, totalling 34,612 of whom 13,888 are Chinese. In addition to these, thousandsof laborers are employed, nearly all of whom are Chinese.

The railway system which the South Manchuria Railway Company took over, in 1906, was in a sorry

state. All the rolling stock had been withdrawn by the Russians or destroyed and most of the bridges had been blown up during the Russian retreat. The main line consisted of a single track from Port Arthur to Changchun, and many of the grades were quite steep. At the beginning the track was changed from the five foot Russian gauge to the narrow gauge used by the railways of Japan, in order that rolling stock brought from Japan might be employed, but soon the entire system was changed to the standard (4′ 8½″) gauge used by the Government Railways of China and rolling stock was imported. (It is interesting to note that while the S.M.R. floated its loans in England, the bulk of its purchases of equipment was made in the United States, the percentage of direct imports from that country being 67 per cent in the 1907–8 period and averaging 31 per cent. during the period 1907–20). The Russian 64½ pound rails were replaced with 80 pound rails and, later, with 100 pound rails, and the main line will soon have been double-tracked all the way between Dairen and Changchun. The grades have been leveled and the roadbed improved. As a result the S.M.R. has provided the best equipped railway system in eastern Asia. It has followed entirely American models and the service is similar to that which is found on the best roads in the United States.

The line between Antung and Mukden was originally built as a light military railway by the Japanese troops during the course of the war. Through treaty with China, the S.M.R. was allowed to rebuild this line, which was done by relocating it in many places, building tunnels and reducing grades, effecting a saving of over 18 miles.

The lines owned and operated by the S.M.R. are as follows :—

1.	Dairen-Changchun (main line)	438.5 miles
2.	Mukden-Antung (Suchiatung-Antung)....	161.7 ,,
3.	Port Arthur-Dairen (Port Arthur-Chou-shuitzu branch)	31.6 ,,
4.	Yingkou (Newchwang) branch (Tashih-chiao-Yingkou)	13.9 ,,
5.	Yentai colliery branch	9.7 ,,
6.	Hunho-Fushun lines	32.9 ,,
7.	Hunho-Yushutai	2.5 ,,
	Total	690.8 miles

Chinese Railway Lines—It should be noted that while Japan has greatly improved, by double-tracking, leveling, etc., its own lines, it has during the twenty years of its operations extended the territory covered by its lines by only a few miles. It has, however, assisted the Chinese by building railways for them, partly by furnishing loans and partly by doing the actual construction work, which have greatly extended the area reached by railways and have thus contributed to opening of heretofore uncultivated territory. All of these lines (with the exception of the Kirin-Changchun line, which is managed by the S.M.R. under a special contract) are owned and operated by Chinese, with the Japanese interest represented on each line only by two or three officials whose duties are entirely supervisory, without power of initiative, the management being under the Chinese Department of Communications. The assistance thus given by the S.M.R. has not been remunerative from a strictly financial point of view, as most of the contracts have been less advantageous than those held by other foreign railway builders

in other parts of China, and as a great part of the interest payable on the Japanese loans advanced for the construction of these lines remains unpaid; still the building thereof has been justified in that they act as feeders to the main line of the S.M.R. These lines are as follows:—

Ssupingkai-Taonan (with Paiyantala branch).	264.5 miles
Taonan-Tsitsihar (Anganchi)	141.7 ,,
Kirin-Changchun	79.3 ,,
Kirin-Tunhua	130.7 ,,

During recent years the Chinese have awakened to the importance of railways and the possibilities of profits in constructing such themselves, and they have built and are building several new lines, as has been described in detail in a previous chapter.

Link In World Travel—The S.M.R. lines are of predominating importance, not only as they furnish the mai line traversing the rich central plains of Manchuria and thus give transportation for exports and imports of the entire region, but also because they constitute an essential link in the rail connection between East Asia and Europe, which is becoming increasingly important and popular with travelers as arrangements progress between the various railway systems concerned which improve the through service materially. The travelers between Europe and Japan travel over the S.M.R. lines between Antung and Changchun, while those from Shanghai and other points south travel over the line between Dairen and Changchun, where connection is made with the Chinese Eastern Railway, as the Chinese railways between Shanghai and Mukden have occasionally been interrupted by civil

Manchuria and Mongolia Natural Resources Museum, Dairen.

Hoshigaura Summer Resort.
Yamato Hotel on the right.

Hoshigaura Beach, Dairen.

Cherry blossoms in Dairen Park.

S. M. R. Central Laboratory, Dairen.

Central Laboratory, Dairen.

Agricultural Experimental Station, Kungchuling.

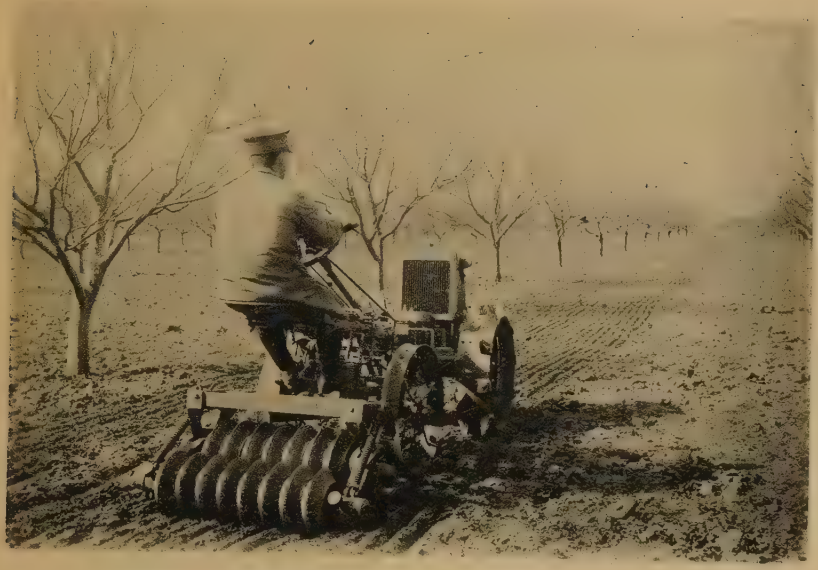
Chinese Harvesting Kaoliang.

Storing of Soya Beans.

Storage of Beans, Dairen.

Chinese Farming.

Kungchuling Experimental Station.



Modern Farming, Kungchuling Experimental Station.

Forest Scene, Manchuria.

Timber Rafts on the Yalu River.

S. M. R. Railway Workshops, Shakako, Dairen.

war. Travel from Peking, Tientsin and other points in North and Central China connects with the S.M.R. lines at Mukden for transportation to Changchun.

An idea of the saving in time which may be effected by traveling by rail, as compared with the time consumed in traveling by sea, may be had from the fact that it takes 15 days to travel by rail from Tokyo to London, while it takes 39 days (N.Y.K.) to make the sea trip from Kobe to Marseilles. The rail trip (D.K.K. boat from Shanghai to Dairen) takes 16 days from Shanghai to London, while the steamer trip from Shanghai to Marseilles takes 34 days. The fare by rail is not much more than half the steamship fare.

Growth of Traffic—While the railway under the Russian regime was conducted mainly for military purposes, its function today is entirely economic. As Manchuria has developed, increasing in population and productivity and opening rapidly to foreign trade, the train service has increased in proportion. Fast expresses, with luxurious observation and dining cars, and Pullman sleeping cars, carry the principal first and second class passenger traffic, while numerous second and third class trains, with diners and sleeping cars, handle the slower traffic, especially the many thousands of Chinese who immigrate into Manchuria every year. As the traffic has increased, better equipment has been provided and schedules gradually shortened until today when the express makes the 436 mile run from Dairen to Changchun in 11.30 hours. The increase attained in business may be seen from the following figures for the year ending March 31,

1929 (amounts given in yen):

	Passengers	Passenger Receipts	Tonnage of Goods	Goods Receipts	Total Receipts	Direct Expenditures
1907	1,512,231	3,594,239	1,486,434	6,160,274	9,768,887	6,101,615
1929	10,410,579	17,451,585	20,461,816	101,089,474	122,137,426	47,213,507

(The total includes, also, miscellaneous receipts)

The principal goods transported are soya beans, bean cake, and other staple products, and the Company's Fushun coal. The fact that the export traffic is far greater than the import traffic constitutes a drawback. The profit derived from passenger transportation comes almost entirely from the third class traffic, the express being operated at a loss.

It will have been seen that, outside of the main part of the original roadbed, practically the entire equipment of the S.M.R. has been provided by the Company itself. In the beginning it was necessary to import from abroad nearly all the material needed, but the Company is now able to construct a large part of its equipment in its own shops. From Russia, Japan inherited only two small repair shops, but today the S.M.R. possesses a large well equipped plant at Shakakou. Here locomotives, cars and all other principal equipment needed by the railway, except rails, can be constructed. The shops are capable of repairing simultaneously 25 locomotives, 36 passenger cars and 54 freight cars, while at the same time constructing and repairing other railway equipment, mining machinery, etc. An electrical repair shop has been established at Dairen.

The railway equipment today comprises 458 locomotives, 533 passenger cars, 7,545 freight cars and cabooses, etc. The stations total 135.

TOWN CONSTRUCTION

THE S.M.R. is in charge of the management of the Railway Zone including the towns connected therewith. The land holdings of the Company, including its real estate in Harbin, Tientsin, Shanghai, and Tokyo, but exclusive of its holdings within the Leased Territory, total about 112.5 square miles. The Zone itself is a mere right of way a few hundred feet wide, while the total area of the various railway towns is 26 square miles.

It must be remembered that during the Russian regime Newchwang and Dairen remained the only places which had actually been opened to foreign trade and residence. Besides their stations along the line, the Russians had established small settlements at Wafangtien, Tashihchiao, Liaoyang, and Kungchuling, but these consisted entirely of residences for the railway employees and barracks for soldiers and were in no way commercial settlements. The S.M.R. took over from the Russians about 5,000 buildings, covering an area of some 174 acres. Today its buildings total 14,029. It leases 1,442 buildings to others.

Modern Facilities — It will thus be seen that the existence of the numerous modern towns along the S.M.R. lines is due entirely to the initiative and management of the S.M.R. Town planning and administration form important activities of the Company, and it has insisted from the very beginning on constructing the towns under its control along the most modern lines. In the beginning

it followed the Russian plan, consisting of central circles whence streets radiate star-wise, but in later planning the rectangular block system has been adopted. Not only have these towns been provided with wide and well paved streets, parks and so forth, but the S.M.R. has also provided lighting and other conveniences. It has thus established electric plants at Dairen, Mukden, Changchun, Antung, Fushun and Anshan, the Fushun plant supplying power to Mukden and Liaoyang as well, and the company has assisted private enterprises to establish electric plants at many other points. It also operates an electric tram line at Fushun and furnishes power for the tram system in Mukden. Gas works were established by it at Dairen, Anshan, Fushun, Mukden, Changchun and Antung. Modern hotels are conducted at Dairen, Port Arthur, Changchun and Mukden, a large and very up-to-date hotel having been constructed at the last-named place at a cost of ¥1,800,000. Seaside hotels are maintained at Hoshigaura (near Dairen) and at Ogondai (Port Arthur). At present the hotels are being operated as a detached concern, but it is being planned to being them back under the direct management of the S.M.R.

Chinese Follow Example—An important feature of the Japanese development has been the fact that it has provided an example which the Chinese have gradually come to follow. A couple of decades ago, the Chinese cities and towns in Manchuria were entirely primitive, with narrow, muddy or dusty streets and low Chinese structures, whereas now they have improved, particularly those which are contiguous to large Japanese railway

towns, such as, for instance, Mukden and Changchun, and have some wide streets, electric light, large modern stores, and in the case of Mukden even an electric tram system. The improvement of Harbin since its municipality came under Chinese administration a few years ago, has also been remarkable. With the development of commerce and industry and as the opening of distant sections by new railways progresses, the towns and their inhabitants progress in civilization, learning to use and enjoy modern advantages.

That the benefits of the efficient administration of the territory under Japanese control are being appreciated and taken advantage of by the Chinese and by foreigners other than Japanese is evident from the fact that the increase of population therein has been rapid out of all proportion to that of the other sections of Manchuria. Thus in March, 1907, the population of the Railway Zone was 29,500, of whom 12,400 were Chinese. In July, 1929, the population of the Railway Zone, according to the Kwantung Government's report for 1929, was 337,314 of whom 228,263 were Chinese and 1,818 foreigners. The total population of the Leased Territory was 862,662 consisting of 105,612 Japanese, 754,826 Chinese, 1,459 Koreans, and 765 foreigners. It is estimated that while during the past quarter century the Chinese population of Manchuria has increased in the ration of 2½, the Chinese population in the Railway Zone, has increased by a ratio of 19, showing that the Chinese, in spite of their political protests, show great practical appreciation of the advantages of life under Japanese administration.

Railway Zone Popular—The reasons for this popularity of the Railway Zone are obvious. In the first place, it is far better policed than is the rest of Manchuria, where bandits, operating sometimes in bands of several hundreds, cause great and constant danger to life and property, even attacking villages and small towns. Modern sanitary systems and water works furnish other advantages. Furthermore, the taxes levied in the Railway Zone are very light and do not include sudden and heavy demands such as are common outside the Zone. As a matter of fact, the taxes levied do not suffice to pay for the improvement and administration of the railway towns, the S.M.R. supplementing these town budgets annually by the contribution of very substantial sums. These advantages have led some foreign business men in Manchuria to the prediction that when extraterritoriality is abandoned in China, Dairen and the Railway Zone seem certain to become the center and chief distributing point for foreign trade in China.

DAIREN

GENERALLY speaking, city construction within the Leased Territory is carried out by the Kwantung Government and in the Railway Zone by the S.M.R., but as the latter has constructed in the towns in the Leased Territory a great number of buildings used in its various activities and to house its numerous employees, as well as numerous public improvements and services, it has contributed materially to the development of Dairen and other towns within this Territory.

Before the advent of the Russians, Dairen, then known as Talienwan, was an inconsiderable fishing village. While Russia devoted her main attention to her naval base at Port Arthur, she intended to develop Dairen as a commercial port and had made some progress when the Russo-Japanese war broke out. The Japanese inherited a mere nucleus of the present city, namely, the section north of the railway tracks, now known as "Russia-machi," which today forms but a small corner of the city. South of the tracks, where the main part of present-day Dairen stands, were only a few buildings, most of them occupied by Chinese, and one street, that running along West Park, had actually been laid out. The ground between the railway and the great circle had been leveled, and that between the great circle and what is today the main wharf was then but an area of rough ground, with hills and ponds, which required a vast amount of grading and filling. For instance, the site of the present Wharf Office building was at that time a pond. The Central Circle and the streets radiating there-

from existed only on the paper plans. The Japanese are, however, indebted to the Russians in that "Russia-machi" was a well built, modern section, which served as an excellent example of what might be done, while the plans for the rest of the city were also found useful. After considerable deliberation, the Japanese decided to follow these plans, and gradually these were much improved upon, leading to the seemingly anomalous condition where Japan, herself an Oriental country, brought a thoroughly western civilization to Manchuria on a scale far more comprehensive than anything that has been accomplished in any other part of China. As a matter of fact, the Japanese establishments in Manchuria are far more modern, in a western material sense, than are any parts of Japan itself, due largely to the fact that here was a clean slate on which to write, and also to the fact that the development was in the hands of a strongly centralized administrative machine, unhampered by traditions or politics, and this machine called into its service some of the best brains of Japan. Western writers visiting Manchuria, and more especially Dairen, have claimed that here is found a picture of what Japan will be in future. Some regret the fact that the artistic and aesthetic factor is being subordinated to the material and concretely useful considerations, but the point remains that in Manchuria Japan has established a contribution to modern civilization which has contributed vastly to the welfare and prosperity of millions of humans, and in far the greatest measure to that of the Chinese.

Growth Of Population — During the Russian occupation, Dairen had a population of 18,000. This had

increased, by July, 1930, to 262,237, of whom 167,500 are Chinese, 94,129 Japanese, and some Russians. Among the other foreigners 49 are British subjects, 31 Germans, and 51 Americans. In many respects, Dairen is the most modern city in China, with excellent water and sewer systems, wide streets and many handsome stone and brick buildings, including numerous banks, public structures, hotels, etc. One finds small trace of the Orient in this architecture, both dwellings and other buildings being constructed after western designs from substantial materials. A few temples and shrines and the Chinese junk wharf at the foot of Russia-machi furnish about the only touches of the picturesqueness of the Orient. To the serious student who is interested in observing the development of modern civilization in the Far East, however, Dairen offers an excellent demonstration of progress, and visits to the Mongolian and Manchurian Specimens Museum in Russia-machi and the Central Laboratory afford the visitor an opportunity to form an estimate of the resources of Manchuria and Mongolia as well as of the work which has been, and is being done to develop the highest possible industrial uses of such. Excellent views of the city and its surroundings may be obtained from the roof of the Wharf Office and from the drive skirting the hills behind Central Park, and in the business section are many large stores where may be obtained the wares of Japan and China, as well as those of foreign manufacture.

Harbor Improvements — When Japan took over Dairen, the port had been less than half completed. Some work had been done on the eastern half of the

north-west breakwater, but nothing had been done on the western half, and only some blocks dumped for the eastern breakwater. Only two wharves had been completed, and the depth of the harbor ranged from 17 to 28 feet, with only 18 feet of water at the main wharf basin. It is estimated that the Russians spent about 30,000,000 roubles on the development of the City and Port of Dairen.

The control and management of the Port is divided between the Kwantung Government and the S.M.R., the former having established the Marine Bureau to supervise Port affairs, quarantine, ships' surveys and inspection, etc., while the S.M.R. is in charge of the extension of harbor facilities and their actual management. Today, the breakwaters total 3,887 metres in length, enclosing a harbor area of 2,961,000 square metres, while the quay and wharf lines total 4,639 metres and can accommodate at one time 40 vessels of an aggregate tonnage of 240,000 tons. In addition to this, the Junk Wharf can berth at one time about 100 junks. The depth of the main basin averages 10 metres, making it possible to berth vessels up to a tonnage of over 30,000 tons.

Port Facilities—The equipment of the Port includes every modern appliance making for speedy and commodious cargo handling and watering and coaling of vessels. These include water supply by hydrants and two waterboats, one coaling vessel and coal shipping plant capable of loading 900 tons per hour, five floating cranes and numerous cranes ashore, 72 warehouses of various kinds with a total floor space of 330,699 sq. metres, twelve 1,500 ton bean oil tanks, about 360,000

sq. metres of open storage ground, 65 miles of railway sidings, and numerous shifting engines, cars, a car dumping plant, motor trucks, tractors, carts, and, in fact, all the equipment used in a thoroughly modern port. While mechanical appliances are employed wherever this is advantageous, advantage is also taken of the fact that at Dairen is found an adequate supply of cheap Chinese labor which is extensively employed, and as a consequence the scheduled charges on the Dairen wharves are lower than those of any other port in the world. With the increase of the amount of cargo handled, efficiency has also been increased, as may be seen from the fact that while, in 1907, 442,000 men handled 1,159,000 tons, in 1930, 3,070,229 men handled 23,068,891 tons, showing an improvement of tonnage handled per man per day of from 2.6 to 7.51 tons. An idea of the development of the Port may be gained from the following figures :—

Fiscal year	1907	Year ending March 31, 1930
Vessels arriving	1,143	3,813
Tonnage loaded and discharged (shipping)	919,952	9,258,951*s. tons
Tonnage loaded and discharged (railway)	417,860	10,353,060 s. tons

(*Plus 679.288 tons bunker coal)

A new coal pier, equipped with the most modern machinery, was completed in July, 1930, and is now operating. This plant can handle four 8,000 ton ships at one time, and it is estimated that 3,800,000 tons of coal will be shipped here annually. The plant cost over 11 million yen.

A dry-dock built by the Russians was able to accommodate vessels up to 3,000 tons. This was taken over by the S.M.R. and later turned over to the Manchuria Dock Co., and has been enlarged so that it can admit vessels up to 6,000 tons gross.

DEVELOPMENT OF TRADE

IN the tremendous development of Manchuria from an almost negligible factor in world trade to its present important commercial and industrial position Japan, and more especially its chief instrument, the S.M.R., has been the principal factor. Until the opening of the Port of Newchwang (Yingkou), in 1860, it was virtually unknown territory, and the trade of Newchwang was no great matter, totaling 16,029,958 H.K. taels in 1903. The advent of the Russians brought no benefit to any one except to the Russians themselves, for they practically excluded all others from trade. Dairen had been declared a free port, but at that point and at Port Arthur, which was in those days the leading city, non-Russian business was represented by only two fairly large German firms and about half a dozen extremely modest firms of other nationalities, most of which were, in fact, only branches of establishments having their headquarters in other parts of the Orient. Their business consisted exclusively in furnishing certain supplies to the Russians, such as railway and building material, and in catering to the needs of the Russian inhabitants. There was no export trade, for there was nothing available for export. Outside of carrying passengers, as a link of the Trans-Siberian Railway, the railway was preponderatingly a military enterprise, and although a treaty provided for the opening of Mukden and some other towns to foreign residence and trade, these had, as a matter of fact, not been so opened until after the Russo-Japanese war, when they were actually opened at the initiative of Japan, which also opened Dairen as a

Free Port in 1906, while a branch of the Chinese Imperial Customs was established there in 1907 to look after goods passing through Dairen into Chinese territory.

Japan's Share In Development—The condition existing in Manchuria at the end of 1906 is described in H. Croly's work on "Willard Straight" as follows: "Manchuria was a comparatively unknown country except to Russians and Japanese, and it was only since the end of the Russo-Japanese war that foreigners, Russians excepted, were proffered opportunities of trading in the interior of the province. The situation in Manchuria was peculiar in this respect. In other parts of China the 'treaty ports'—that is, the cities where foreigners may reside and established permanent business bases—are situated only on the seacoast or on the bank of a navigable stream. The Chinese had permitted very few cities in the interior to become centres of foreign trade. But in Manchuria there were at this time eighteen open cities of which only two, Newchwang and Antung, were accessible from the sea. Japan was responsible for the opening up of sixteen of these cities."

The Japanese thus not only contributed to the benefit of all nations generally by opening to all a trade which had heretofore been confined practically exclusively to the Russians, but, through the S.M.R., they furnished facilities for the development of these new markets by providing adequate transportation facilities; by increasing production, partly by assisting the Chinese in building railways which have thrown open to cultivation vast uncultivated regions, and partly by advancing and improving

Chinese agricultural methods by improving seeds and live-stock through experiment stations; by finding and developing markets abroad for Manchurian produce; by discovering new uses for Manchurian raw materials; by providing safety in a region where such is not ordinarily found; by building modern trade and residence areas; and by carrying on works of various kinds for the public benefit through the establishment of schools and hospitals and of a sanitation system which keeps at arm's length such epidemics as plague and cholera which often threaten this part of the world; in fact, by generally creating the conditions necessary for safe residence and the carrying on of trade—and from these conditions the Chinese and the foreigners benefit as well as the Japanese, to the extent that the commerce of South Manchuria has grown from the modest total of 16,029,958 H.K. taels represented by the Newchwang trade in 1903 to the point where among all the ports of China Dairen stands second only to Shanghai in direct trade.

The "Open Door"—In this connection it may not be out of place to take up the matter of the maintenance in Manchuria of the "Open Door" principle, regarding which much misinformation has been spread abroad in the past. In December, 1899, Japan agreed to the proposal of the United States for an "Open Door" in China. When, after the Russo-Japanese war, Japan entered into her present position in Manchuria, numerous charges were at first made to the effect that the S.M.R. and other Japanese factors were by various underhand methods violating the "Open Door" principle by giving preference to Japanese merchants and goods, thus causing trade

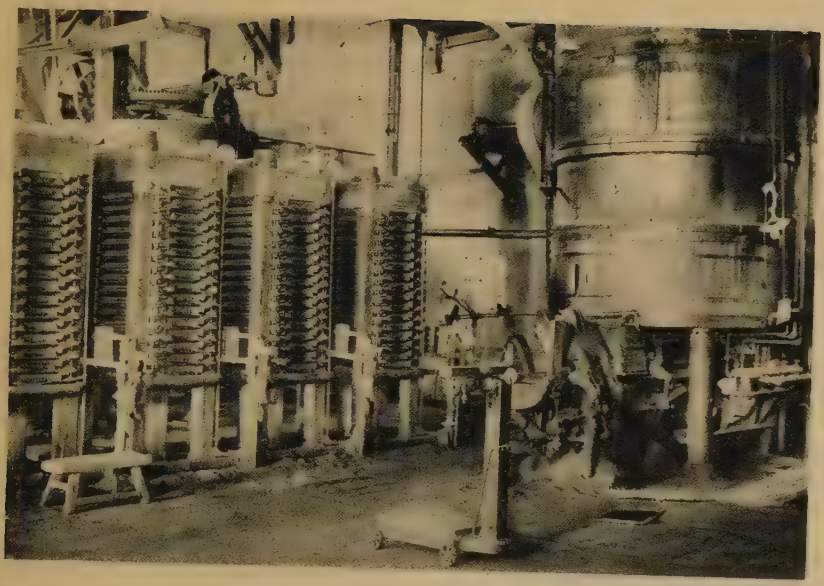
operations by other nationals to suffer. As a matter of fact, during the period of cleaning up after the war, while the military were still engaged in the work of withdrawing troops and the authorities generally were occupied with the task of inaugurating an administrative machinery which would bring order out of the chaos left in this region which had been swept by the war, commercial operations generally were unsatisfactory to all. The charges of favoritism on the part of the Japanese organs towards their own nationals, which originated mainly from seekers of railway concessions which would violate Japanese rights as established by agreements with China, led to the appointment, in 1906, of a commission consisting of three representatives of American commercial interests in Shanghai. After having visited Manchuria, this commission reported to the American Minister at Peking that, despite the fact that the Japanese Government had made available every facility for pursuing investigation, and after a most comprehensive inquiry " it is most difficult, if not impossible, to offer any satisfactory evidence to substantiate the theory that the Japanese Government, through the instrumentality of either its military or civil authorities, is at present purposely interfering with or placing any obstacles in the path of other nations for the industrial exploitation of this important part of the Chinese Empire."

False reports of this kind are, however, difficult to combat, and every effort has been, and is being made by Japan to make it certain that the foreign merchants may have no complaint to find. Thus, with this end in view, the S.M.R. some years ago established in Mukden a

"Foreign Section," the duty of which it is to extend to foreigners cooperation in every way and to handle complaints which may arise from them. As a consequence, the heads of the many large foreign commercial enterprises which do a thriving business in Manchuria, particularly in oil and tobacco, are emphatic in their expressions of appreciation of the service of the S.M.R., which, in spite of all kinds of disturbed conditions, provides safe and certain transportation for goods and passengers, a service which is especially appreciated in these days of unrest in China, where the S.M.R. has been the only railway to operate without interruption during the past few years, thus allowing business in Manchuria to carry on as usual while that in all other parts has been seriously affected.

Growth of Commerce—The best idea of how great has been the development of the trade of Dairen, which during the past quarter century has grown from an entirely negligible beginning, may probably be gained by the study of a few statistical data, such as, for instance, the following figures showing the totals of imports and exports for the Port of Dairen during 1929 (figures compiled by the U.S. Consulate, Dairen):

Imports from		Exports to	
Japan	$53,797,336	Japan	$74,032,831
United States	14,357,156	Netherlands	19,169,140
Hongkong	7,353,650	Great Britain	13,934,175
Great Britain	6,015,085	United States	6,452,613
Germany	4,942,996	Dutch E. Indies	4,541,296
Belgium	3,202,570	Hongkong	3,550,453
Canada	2,090,485	Italy	3,150,419
British India	1,148,939	Korea	1,566,088
Korea	989,026	Philippine Islands	1,232,088



Modern Bean Oil Mill, Dairen.

Fushun Coal Mine in 1904.

Open Cut, Fushun Coal Mine.

Oil Shale Distillation Plant, Fushun.

Chinese Laborers Quarters at Fushun.

Iron Works, Anshan.

Engineering College, Port Arthur.

Sports at Stadium, Dairen.

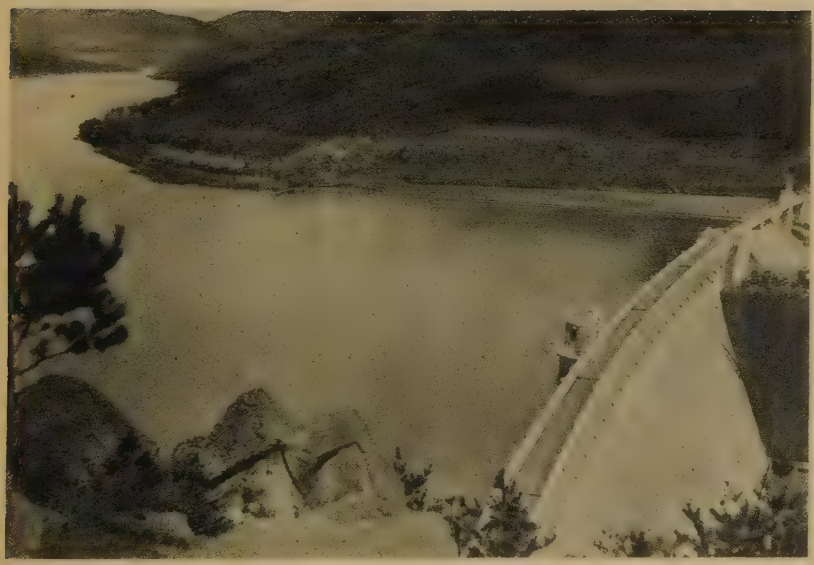
Kindergarten at Changchun.

School for Koreans, Changchun.

Winter Sports on Yalu River at Antung.

S. M. R. Hospital. Dairen.

Entrance to S. M. R. Hospital, Mukden.



Reservoir which supplies, Dairen.

Yamato Hotel, Dairen.

Yamato Hotel, Mukden.

Italy	941,806	Germany	849,106
Netherlands	595,559	France	689,648
France	580,343	Canada	280,919
Other Countries.	1,617,464	Other Countries.	24,015,495
Total Imports..	$97,632,415	Total Exports	$153,464,271

It must be noted that a considerable part of the goods which appear as imports from Japan and Hongkong, are, in fact, American and European goods which have been trans-shipped from these countries. A similar condition holds good with respect to exports.

The fact that the trade of European countries, the United States and Canada has increased in considerably greater proportion than has that of Japan is shown from the comparison with the following figures showing trade percentages in 1908:

To	1908
Japan	67.1%
Korea	.2
China	30.1
Europe	2.6
America	—
Others	—

It may be noted that at one time America was a far greater factor in Manchurian export trade, taking, for instance, 90 per cent. of the bean oil export in 1922, but since then a new American tariff has virtually killed this trade.

Shipping—The following figures are taken from the annual trade report of the Chinese Maritime Customs (Dairen being a Free Port, a Chinese Custom House

operates in Dairen and handles goods destined for or being exported from Manchuria outside of the Japanese Leased Territory):

Vessels Entered and Cleared at the Maritime Customs under General Regulations during 1929.

Flag	Ocean Steamers		Sailing Vessels (Foreign Type)		Total	
	No.	Tons	No.	Tons	No.	Tons
American	108	428,552	—	—	108	428,552
Belgian	2	7,226	—	—	2	7,226
British	516	1,428,634	—	—	516	1,428,634
Danish	26	118,022	—	—	26	118,022
Dutch	51	189,696	—	—	51	189,696
Finish	4	5.820	—	—	4	5,820
French	18	72,984	—	—	18	72,984
German	219	880,434	—	—	219	880,434
Italian	38	194,184	—	—	38	194,184
Japanese	5,559	9,365,185	218	8.084	5.777	9,373,269
Norwegian ..	78	205,778	—	—	78	205,778
Swedish.....	18	68,348	—	—	18	68,348
Chinese	1,356	1,083,445	—	—	1,356	1,083,445
Total.....	7,993	14,048.308	218	8,084	8,211	14,056,392

Vessels Entered and Cleared at the Maritime Customs under General Regulations, 1920 to 1929.

Year	Ocean Steamers		Sailing Vessels (Foreign Type)		Total	
	No.	Tons	No.	Tons	No.	Tons
1920.....	5,084	5,507,705	116	1,609	5,200	5,509,314
1921.....	4,534	6,328,019	58	715	4,592	6,328,734
1922.....	5,075	8,201,828	74	1,291	5,149	8,203,119
1923.....	5,475	9,034,351	88	7,676	5,563	9,042,027
1924.....	5,255	9,284,339	100	3,925	5,355	9,288,264
1925.....	6,343	10,356,762	113	4,798	6,456	10,361,560
1926.....	6,703	11,056,726	88	3,188	6,791	11,059,914
1927.....	6,938	11,555,220	227	9,797	7,165	11,565,017
1928.....	7,582	12,448,371	167	6,668	7,749	12,455,039
1929.....	7,993	14,048,308	218	8,084	8,211	14,056,392

The position of Dairen as compared with the principal Chinese ports may be seen from the following figures (taken from the Chinese Maritime Customs Report) showing the value of direct foreign trade for 1928:

Shanghai	910,828,037	Hk. T.
Dairen	305,406,119	,,
Tientsin	194,629,733	,,
Canton	113,422,034	,,
Harbin, etc.	104,351,856	,,
Antung etc.	86,719,684	,,
Hankow	78,163,966	,,

Distribution Of Trade—In the commerce of Manchuria Chinese, Japanese and foreigners all engage. As is natural, the preponderating part is played by the Chinese, who are natural traders, and they predominate in this field, even in the Leased Territory and the Railway Zone where they drive the smaller Japanese merchants into the background. The Japanese excel mainly, in both commerce and industry, in enterprises on a large scale which require large capital and organization, inability on the part of the Chinese, especially in the latter, giving the Japanese an advantage here. An idea of the number of foreign residents of the principal nationalities in the most important centers of Manchuria may be gained from the following table:

	British	American	German	French
Dairen	49	51	31 (3)	
Mukden	154 (77)	77 (26)	134 (24)	43
Harbin	215 (12)	93 (3)	192 (15)	73 (56)
Newchwang	43 (35)			
	461 (124)	221 (29)	357 (42)	116 (56)
	585	250	399	

Cities Proper

	British		American		German		French	
	1928	1930	1928	1930	1928	1930	1928	1930
Dairen....	55	49	19	51	26	31		—
Mukden ..	136	154	89	77	150	134	30	43
Harbin....	137	215	58	93	162	192	42	73

(Figures in parentheses show nationals in consular destricts outside of cities named.)

In commerce and industry the Chinese have the natural advantage of being natives of the country and of having the lowest wage expense. The Japanese firms have the advantage over other foreigners in that the salaries paid their employees are far lower than those paid Americans and Europeans and owing to the more modest scale of their necessities they travel with more freedom and are able to live in remote places where other foreigners dislike to dwell. They enjoy the ability to read Chinese, the characters being much the same as their own, and many of them speak the language as well.

One of the greatest drawbacks to Japanese business in Manchuria is their inability to rent land, outside the Railway Zone, except in exceptional cases. While legally, under the Treaty of 1915, they possess such right, they have, as a matter of fact, been obstructed from actually enjoying it, and this point forms one of the principal grounds for dissatisfaction with the Manchurian government on the part of the Japanese residents.

AGRICULTURE

THE principal wealth of Manchuria lies in its vast area of productive soil. It is estimated that somewhat over 30,500,000 acres are now under cultivation as against a total arable area of about 64,500,000 acres. Plentiful opportunity thus exists for a great future development, especially since the overcrowded provinces of Shantung and Chihli furnish a virtually inexhaustible labor supply close at hand. The density of population in Manchuria averages 72 persons per square mile, as compared with the 390 per square mile in Japan and 201 in Korea. Not only are the lands of Manchuria Proper constantly being opened, but, with the advance of the railroads, the Manchurian border is gradually creeping westwards into Inner Mongolia, as the Manchurian government, by arrangements with the Mongolian princes, takes over the administration of territory owned by these and encourages Chinese farmers to bring under the plough large areas hitherto used only for pasture by the Mongols. Every year therefore sees huge hordes of Chinese arriving in Manchuria from Shantung and Chihli.

It has been estimated that the total value of the annual agricultural crops of Manchuria, which is today about one billion yen, may, when all the arable land has been placed under cultivation and when various improvements in cultivation methods have been brought about, reach an annual total of about three billion yen.

S.M.R. Fosters Industry—The role which the S.M.R.

is playing in bringing about this rapidly increasing development of Manchuria's agricultural resources, is a very important one, and this is particularly the case in respect to the soya bean. This article, which has become the most important product, had been grown for food purposes for many years before the opening of Newchwang while some had been exported to southern ports in China. At the time of the Russo-Japanese war the Japanese became aware of the value of the bean, especially of the bean cake for use as fertilizer, but the bean did not enter upon its career as an important factor in international trade until 1910, when Mitsui & Co. made a trial shipment of 100 tons to England. Since then, mainly through the continued experiments of the Central Laboratory, maintained in Dairen by the S.M.R., many new uses have been found for the bean until today the articles manufactured from beans, bean oil and bean cake include the following: soy and various sauces, soups, breakfast foods, condensed milk, casein, cheese, salad material, crackers, macaroni, flour, confectionery, glycerine, explosives, enamels, varnishes, butter and lard substitutes, edible oils, salad oils, water-proofing material, linolium, paints, soap, celluloid, rubber substitutes, printing inks, lighting and lubricating oils, etc. The bean cake is also used extensively for fodder and as fertilizer.

Increase Of Production—At the same time the S.M.R. Agricultural Experiment Stations at Kungchuling and elsewhere have through continuous experiments and distribution of superior seeds to Chinese farmers increased the crops by from 10 to 20 per cent while the oil content of such improved beans has increased by more than ten

per cent. The use of these improvements is being advocated by means of poster campaigns and other forms of propaganda, while demonstrations are being made to instruct the farmers in new methods. At the same time a great industry in manufacturing the beans into oil and cakes has sprung up, modern methods rapidly replacing the old-fashioned presses.

Other Manchurian crops include kaoliang, millet, corn, wheat, barley, rice and other crops. The S.M.R. has taken special pains to improve the cultivation of rice, which is increasing in importance since the advent of the Japanese. This is being cultivated mainly by Korean immigrants, though the Chinese in Manchuria are gradually learning how to grow this crop, and as the soil and climate in many places in Manchuria and Inner Mongolia are favorable, it is expected that rice may become an important crop. The S.M.R. experiment stations have also laid the foundation for a sugar beet industry, and have given considerable impetus to the development of tobacco cultivation, fruit farming and other forms of agricultural activity.

An important contribution to the welfare of Manchuria has been made by the Kungchuling Experiment Station through the improvement of the Mongolian sheep by crossing it with the Merino, which has met with much success, the wool product per sheep having been almost quadrupled by this means. It is estimated that when the 2,000,000 sheep of Manchuria and Inner Mongolia have been improved, total wool production will be raised from 5,320,000 to about 20,000,000 pounds.

In spite of the fact that large areas of Manchuria suffer, as do other parts of China, from forest denudation, practically no afforestation work is being done, except by the Kwantung Government and by the S.M.R., the afforested area under government management being 21,600 acres, while other such areas, both public and privately owned, total 147,000 acres. An annual "Arbor Day" is observed when many trees are set out.

Chinese Principal Gainers—While the S.M.R. has thus been the principal instrument for bringing about all this progress in Manchurian agriculture, the benefit therefrom, as far as the Japanese are concerned, has been almost entirely indirect, the direct and greatest profits having been gained by the Chinese. Thus the Chinese gain the profits from the sale of the crops, while the Japanese share consists mainly of what can be made from transporting the products and manufacturing them, but in both these enterprises the Chinese participate as well. The principal aim of Japan is, however, more important than the question of immediate and direct gains. As has been stated, Japan's policy is to develop Manchuria to the point where it can furnish her with the raw materials which she needs, which will naturally be accompanied by the development of an increased population with rapidly ascending buying power, which in turn will create a market in which Japan can sell her manufactures.

Trade—Not Colonization—In this way, and in this way only, can Manchuria contribute to the solution of the most serious question now confronting Japan, namely, that of providing for the increase in her population.

Emigration to the United States, Canada and Australia, the most promising fields, has been prohibited for Japanese, and such emigration as is taking place to South America and other points is too insignificant to offer a solution. The great and fertile uncultivated areas in Manchuria might seem at first glance to provide an ideal place for Japan's surplus millions, but it has been definitely demonstrated that they do not. Even if the present obstruction to leasing of land by Japanese were removed, this would probably not contribute greatly towards facilitating Japanese agricultural enterprise, though it would be advantageous for commercial and industrial undertakings. The principal point lies in the fact that the Japanese small farmer cannot compete with the Chinese. In the first place, his standard of living in far higher. The Japanese insists on a clean home, his daily hot bath, and adequate education for his children, which to the Chinese farmer are luxuries in which he does not think of indulging. The Japanese farmer buys much of his food from the homeland, which involves considerable expense, while the Chinese lives far more frugally and almost entirely from products raised on his own soil. Furthermore, the Chinese works far longer hours and is content with plodding patiently along for a small profit or even a mere existence, while the Japanese insists on more rapid results. Experiments have been made by the S.M.R. whereby numbers of Japanese farmers were provided with land in the Railway Zone and encouraged to cultivate it under conditions far more favorable than those ordinarily obtainable, and the result was a failure—they could not make the venture profitable. When to these factors is added the fact that the Japanese generally dislike the

rigorous climate of Manchuria and always contrast the relatively bare and drab features of its plains with the beauty and charm of their home-land with its manifold historic and aesthetic associations, one must arrive at the conclusion—as have the Japanese themselves—that the plan now followed by Japan, and not colonization, furnishes the logical way for making Manchuria profitable to Japan.

Chinese Immigration—Even during the past century when government regulations forbade their entry north of the Wall, Chinese from the northern provinces of China Proper penetrated into Manchuria and settled there. As development in Manchuria on modern lines began and the regulations were removed, the number of immigrants increased greatly. The majority of these were, however, men who came to work in the fields or in mines and other industrial undertakings. Many of them who had come to labor in the fields, returned to their homes in Shantung and parts of China when the harvest work had been done. These were mostly males who did not bring their families. During the half dozen years when great undeveloped areas were opened by the construction of railways and when the disorders existing in China Proper made Manchuria appear by contrast as a most desirable haven of refuge, the tide of immigration became rapidly much greater, and the number of immigrants who remained to spend the rest of their days in Manchuria increased. The following figures will give an accurate idea of the situation:

EMIGRANTS ARRIVING AT MANCHURIAN PORTS

Year	Dairen	Newchwang	Mukden	Antung	Total
1923	172,041	73,016	96,608	—	341,638
1924	167,206	70,021	147,503	—	384,730
1925	214,161	65,092	138,594	55,131	472,978
1926	302,231	92,568	117,082	54,844	566,725
1927	499,452	153,771	218,726	78,879	950,828
1928	506,553	152,556	226,660	52,703	938,472
1929	512,947	148,577	331,210	53,557	1,046,291
1930 (Jan.-June, incl.)					431,422

Note: In 1929, 83.7 per cent of the total arrivals in Manchuria were men and 16.3 per cent were women; and in 1927, 84.1 per cent were men and 15.9 per cent were women.

EMIGRANTS RETURNING HOME FROM MANCHURIAN PORTS

Year	Dairen	Newchwang	Mukden	Antung	Total
1923	122,474	53,709	64,382	—	240,565
1924	113,249	48,987	37,810	—	200,046
1925	102,961	49,003	49,291	36,491	237,746
1926	137,547	61,842	95,832	29,473	323,694
1927	141,859	62,463	107,731	29,906	341,959
1928	168,530	98,670	99,413	27,634	394,247
1929	219,293	78,854	289,572	34,178	621,897
1930 (Jan.-June, incl.)					207,328

During the past year the number of immigrants coming to Manchuria has decreased remarkably. This was due in the first place to the unsettled situation created by the Sino-Russian conflict in the regions where a large number of settlers usually establish themselves, but other, more prominent, factors contributed in probbaly

a more important degree. A Chinese authority, Dr. Franklin L. Ho, who made an investigation of the situation, gives the principal reasons for this decrease in immigration as being the presence of banditry; the lack of reliable information which resulted in many immigrants failing in their settlement because they were ignorant of the land opportunities in the places in which they settled; the depreciation and confusion of currency; and insufficiency of capital coupled with lack of proper rural credit facilities, as the rate of interest which farmers have to pay for their loans usually varies from 40 percent to 75 percent for a crop season of approximately four months.

The poor economic conditions prevailing in Manchuria during the past year, owing in part to the Russo-Chinese conflict, but far more to the fall in the value of silver and the lack of demand abroad for beans, has contributed to some extent to the decrease in immigration. This condition is, however, a temporary one, which should not be prolonged, unless Manchuria should become seriously involved in Chinese warfare, as it was in the days of Chang Tso-lin. Therefore it is generally expected that, with the building of new railways and other developments, immigration will be resumed soon on a large scale.

INDUSTRIES

UNTIL a few decades ago, Manchuria was industrially in a very primitive state. It has become important partly through introduction of modern machinery and methods for handling products which had in the past been manufactured by very crude and wasteful processes, and partly by the establishment of numerous new industries by which use is now being made of raw materials which formerly were not used at all. In this work the S.M.R. has taken an outstanding part by the establishment of various research and experimental institutions, such as the Central Laboratory and Geological Institute in Dairen and others. Numerous scientists in its employ have combed Manchuria in search of materials which might be manufactured profitably, and have developed manufacturing processes. In many cases the Company has been the pioneer in establishing factories in which new industries have been given a start; then turning such over to private enterprise as soon as they were able to stand on their own feet, and in this way an example has been set and an impetus given to many of the new industries of Manchuria by which many thousands are employed, thus adding materially to the prosperity of the population and the country generally.

Modern Methods Introduced—Even the crude native bean oil mill is rather new in Manchuria, the first having been established about seventy years ago. The first steam plant was introduced by an Englishman in Newchwang in 1896, but the actual establishment of bean oil milling

on a large scale followed the advent of the Japanese, and subsequently numerous improvements have been made in manufacturing methods which have contributed largely to the growth of the industry. Dairen, where not a single bean mill of any kind existed in the Russian days, is now the center of this industry, though modern mills are also found elsewhere, and many hundreds of fairly primitive native mills scattered throughout Manchuria manage to operate very profitably.

Flour milling is mainly an industry of North Manchuria, where the principal wheat crops are found, but such mills are also operating in South Manchuria. This industry has seen great fluctuations, owing mainly to commercial conditions in the outside world, but as the native population of Asia is turning to wheat as a food stuff in increasing degree, the flour industry offers considerable promise.

Work Of S.M.R. Laboratories—The part which the S.M.R., through the Central Laboratory and other agencies, has taken in the development of new industries, is interesting. The Central Laboratory not only renders assistance to private enterprise by furnishing analytical tests, estimates and the like, but it is constantly conducting investigations into various fields of research. An idea of the scope of its activities may be gained from the following eight divisions which it contains, namely, Analytical Chemistry, Applied Chemistry, Textile and Dyeing, Pottery, Fermentation, Sanitary Chemistry, Electrical Chemistry, and Detail, in addition to which it establishes experimental work-shops wherever it seems

possible to develop any enterprise on a sound commercial basis.

Among its activities have been the founding of a bean mill employing the chemical extraction system, and the numerous new uses of the bean, which have been enumerated already, have been due mainly to the researches of this Laboratory. In 1910, an earthenware and porcelain factory was established, which was later on turned over to private enterprise. This brought an entirely new industry to Manchuria, which had in the past imported all its pottery, although abundant and excellent raw material is found at various points within its boundaries. Manufacture of fire brick and bricks of various other kinds has also been developed, as well as that of glass of various kinds, which has been extremely successful, especially as raw material of a high order is found near Dairen. The numerous valuable industrial minerals which are found in quantity and variety in Manchuria, have been studied and various products manufactured therefrom, and similar work has been done whereby various new uses have been found for agricultural products, while several improvements in the method of handling the wild silk industry, which is of considerable importance, have been effected and imparted to the Chinese. It follows that Manchuria has benefited enormously by these activities which have given value to many heretofore unused raw materials and have increased that of those which were formerly produced wastefully and crudely by means of primitive methods. Numerous manufacturing enterprises have been developed, such as sugar manufacture, spinning mills, etc., in which Chinese,

Japanese, and foreigners engage, and employment has been furnished to many thousands, all of which has, of course, added enormously to the material wealth of the country.

Darker Side Of Picture—While the development of Manchuria on the whole presents a bright future, especially as compared with conditions existing in China Proper, the situation also at times has its dark sides. The past year, for instance, has not been a prosperous one as compared with its predecessors. In the first place the disturbances and uncertainty created by the Sino-Russian conflict interfered to some extent with the progress of normal development. Settlers who had already established themselves in some of the areas influenced by the conflict, found it necessary to evacuate, and new settlers naturally would not go to these regions. Even after the cessation of hostilities, conditions in some parts in the North have remained bad, owing to some extent to the prevalence of large bands of partisans and bandits, whose activities appear to be increasing. Furthermore, the Chinese authorities were compelled to spend on military operations money which might otherwise have been employed for purposes of development.

The conflict interfered to some extent with the movement of the crops harvested in rich regions of North Manchuria, and when the conflict ceased, just after the harvest was over, the price of soya beans, which form the principal export product of Manchuria, had dropped in the European markets. This was due partly to the fact that the European countries which buy beans on a large scale, enjoyed a very mild winter. As a consequence

Old Russian Fort, Port Arthur.

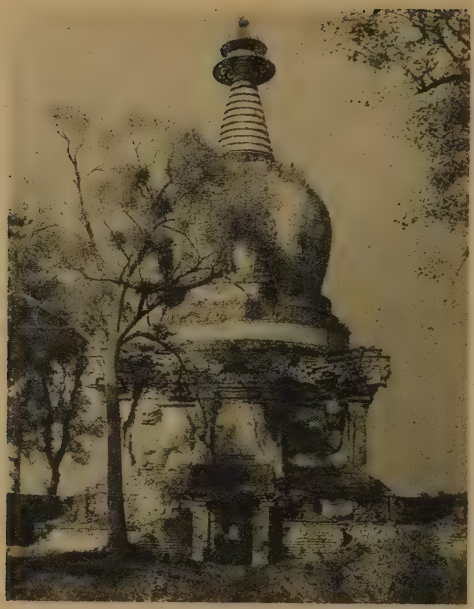
Russo-Japanese War Relics, Port Arthur.

Scene at Rokotan, a suburb of Dairen.

Dragon Fountain Temple, Chienshan near Tangkangtzu.

Pagoda,
Liaoyang.

Tangkangtzu Hot Springs Hotel.



Lama Tower.
Mukden.

Manchu Mausoleum, Mukden.

Manchu Mausoleum, Mukden.

Scene on Mukden-Antung Line.

Rafting of Timber near Penchihu.

Scene on Sungari River, Harbin.

Kitaiskaya, Harbin.

Old Chinese City Wall, Hsiugyaocheng.

Modern Street in Old Walled Town, Mukden.

Street Scene, Walled City, Mukden.

the cattle there spent most of the winter in pastures, doing away with the necessity of stall feeding. As the European bean millers therefore could not find much of a market for the bean cake, which is one of the most important articles manufactured from the bean, prices naturally dropped.

The bean industry is being threatened through the fact that adulteration of the beans by Chinese farmers and merchants, who have formed the habit of mixing with them fine gravel or sand in order to increase weight, is reaching serious proportions. Numerous complaints have been received from buyers abroad with regard to this practice, and one result has been that foreign consumers have already begun to try to establish soya bean culture in other parts of the world. The United States already has a respectable soya bean industry, and it is reported that experimental plantings in Africa and elsewhere have been successful. Even Chinese have pointed out that if this practice be allowed to continue, China may soon lose her markets for her beans in the same way as she lost her silk and tea markets in the past. Such an event would be disastrous to Manchuria which depends upon its development and prosperity largely upon the sale of soya beans, which brings into the country the large sums of money which are being employed for its advancement, and it is evident that from such a disaster all nationals with interests in Manchuria, Chinese, Japanese and foreigners alike, would suffer. A scheme for proper inspection of the beans is reported to have been considered by the Chinese authorities, who, however, do not regard it favorably as the farmers would object

to the cost of inspection and as the system would open a way for "squeeze." Foreign merchants generally believe that the establishment of a system of elevators, with small plants at the main bean collection stations and larger plants at the principal ports, would meet the situation, as in this manner the beans could not only be cleaned, but it would be possible by the same means to reduce the moisture in the beans, which is a great drawback, especially in wet seasons. The South Manchuria Railway Company has already begun the construction of some elevators in Dairen, which will be employed for experimental purposes.

Another great drawback to the economic development of Manchuria is found in the confused condition of the currency system. The provincial banks issue such tremendous issues of paper money that in many cases no one knows the total thereof, and as the silver reserves are so small as to be utterly negligible, the inevitable result has been that their value fluctuates wildly with a continued tendency towards depreciation. Thus the Fengpiao, issued by the Mukden Government, the supposed par of which is 120 Fengpiaos to 100 yen, now (September, 1930) stands at 10,400 Fengpiao to 100 yen, while the Harbin dollar, which a few years ago stood a little higher than the yen, now stands at the rate of about 230 Harbin dollars to 100 yen. In addition to these currencies, one finds a number of other provincial currencies which have all depreciated and the constant fluctuations of which tend to complicate financial dealings, the result being that the Japanese yen is being used largely throughout the most important parts of Manchuria. To this the

Chinese often object strenuously, but in view of the fact that no other staple currency is available, the use of the yen is inevitable.

At the time of writing the Manchurian Government has just departed from the policy which it had followed up to this time of keeping strictly aloof from the political and military turmoil which usually prevails in China Proper. While it is impossible at this time to foresee what the results will be, or even to estimate what the actual intentions of the Manchurian authorities are, the recent move, whereby large bodies of troops were sent south of the Great Wall to occupy Tientsin, Peking and the surrounding districts, is being regarded with considerable diffidence by those who remember the disastrous experiences of Chang Tso-lin, whose military and political adventures in China Proper brought only misery to Manchuria, as their result was that the money which Manchuria has gained by industry and thrift, was frittered away in senseless warfare and political intrigue from which the Manchurian people, outside of a few office holders who obtained lucrative jobs in Peking and elsewhere, gained no benefit whatever, while on the other hand, the population suffered from high taxation and continued demands for men, transport animals, etc.

The above described factors tend to make the outlook for Manchuria rather uncertain as far as the immediate future is concerned. Generally speaking, however, looking forward to a long period of years, it seems evident that while the march of progress may suffer from unforeseen setbacks, such as have been described, the development

of the provinces is certain to progress gradually, rapidly or slowly as the case may be, owing to the fact that the rich uncultivated areas found there will be certain to attract millions of Chinese from China Proper, who will raise crops which will bring money into Manchuria, gradually increasing their purchasing capacity, so that they will continue to construct railways and other developments and offer a market for foreign goods.

COAL MINES

THE Fushun coal mines, which form one of the principal assets of the S.M.R. Co., are located about twenty miles east of Mukden and are connected by rail with the main line. This coal field, which was acquired in 1907, covers some 16,500 acres, nearly ten miles from east to west and 2½ miles from north to south, with one coal seam ranging in thickness from 78 to 420 feet, the average being 130 feet. The impurities do not exceed 20 feet in total thickness, and the total coal content is estimated at over a billion tons, of which up to the present 75,000,000 tons have been mined.

These deposits were originally discovered some 600 years ago by Koreans who worked them in a very primitive way, but later the Manchu government forbade further operations, as they feared they might interfere with the spirits of departed imperial ancestors whose graves were in the vicinity. When the Russians entered Manchuria they took up mining here, but the scale was so limited that the daily output was only 360 tons. Under Japanese management extensive improvements have been made and numerous modern methods introduced. A number of pits have been sunk and the spectacular "open cut" opened whence huge amounts of coal are stripped, which has increased production to the point where the whole output in 1929 was 7,292,661 tons of which approximately 50 per cent was produced in the great "Open Cut" mine.

The annual output for 1930 will be reduced to 7,100,000 tons due to the small demand on the markets caused by the business depression which has influenced a number of industrial plants which chiefly use Fushun coal. It is expected that mining can be continued for another 80 years. It is estimated that about 200,000,000 tons may be taken out by stripping methods, by which the recovery is about 100 per cent, while the remaining 750,000,000 tons must be taken out by the hydraulic stowage system through which from 60 to 70 per cent may be recovered.

Fushun coal is bituminous, of high quality, and suitable for locomotives and marine engines, and is also excellent for gas making. A Mond gas producer plant has been established which generates electric power and also produces a large quantity of sulphate of ammonia as a by-product, and coke ovens are also being operated. The coal is being used by the S.M.R., and large quantities are exported, while the growing demand for coal as a fuel by the inhabitants of Manchuria accounts for a large consumption locally.

Oil Distillation—An important industry which has been developed in connection with the Fushun mines, is the distillation of oil from the shale deposits which are estimated to amount to about 5,300,000,000 tons, of which 200,000,000 tons can be excavated from the present open cut mines. This shale must be taken out in connection with the coal mining operations in the open cut, and thus this raw material is virtually obtained without involving extra cost. Approximately 1,400,000

tons of shale will be used annually in the new plant, which began operations on December 30, 1929. About 70,000 tons of crude oil and 18,000 tons of sulphate of ammonia will be manufactured annually. Paraffin and coke is also being obtained, though on a small scale at present.

With the development of the Fushun mines, a large and modern town was built, but as it was discovered that it had been located over a valuable coal seam, which is to be exploited by the open cut system, it became necessary to move it and the work of rebuilding the town on a new site was recently completed.

The Yentai coal mine, about ten miles north-east of Yentai station, with which it is connected with the S.M.R. main line by rail, is about 3½ miles long by one mile in width, with an estimated deposit of 20,000,000 tons. This colliery began operations in 1910, and its output during the year ending March 31, 1930, was 136,201 tons of semi-anthracite coal.

ANSHAN IRON WORKS

IN 1909 officials of the S. M. R. Geological Institute discovered the presence of iron deposits at and about Anshan, and about six years later development thereof was made possible through a treaty with China. A site of about 4,500 acres was purchased for the plant and the modern town which has been built there. While the ore reserve is large, being estimated at about 300,000,000 tons, most of the ore is of rather poor grade, averaging from 35 to 40 per cent of metal to the ton. The richer grades, averaging some 52 per cent are scattered in small deposits, most of which have already been worked.

The first pig iron was produced in the Spring of 1919, but as the price of iron which had been abnormally high during the war years, soon fell considerably, the high hopes originally entertained were to some extent disappointed. Iron is, however, a most important commodity to Japanese industry, only very small deposits thereof being found in Japan, and the S.M.R. therefore continued to develop the plant although this involved a heavy financial loss at the time.

To the two blast furnaces, each capable of producing 250 M.T. daily, which had been operated for sometime past, was this year added a 500 M.T. blast furnace. One of the original furnaces is now being reconstructed. The output in 1929 was 218,000 metric tons of pig iron, while it is estimated that the 1930 output will reach 280,000 metric tons. A smaller plant at Penchihu, north

of Anshan, produced 77,000 metric tons in 1929, and is expected to produce 78,000 metric tons in 1930. The Anshan works also operates coke ovens, gas works, an electric plant, etc.

The principal problem before the management consisted in devising a method for handling economically the low grade ores which form the greater part of the deposits. After considerable study, one of the Japanese experts attached to the plant invented the so-called hematite reducing system and magnetic concentration method. A large concentration plant was built which provides a preliminary treatment of the ores making it possible to recover their metal content economically.

The establishment of a steel works is now under consideration.

EDUCATION AND HEALTH SERVICES

AMONG the various activities of the S.M.R. which have no relation to the railway business but which are entirely in line with its functions as a civilizing agency, the maintenance and management of educational institutions, hospitals and sanitation generally are among the most important.

The school administration in the Leased Territory is mainly in the hands of the Kwantung Government, while the S.M.R. has charge of that in the Railway Zone. The former maintains 20 primary schools for Japanese, four middle schools, 3 girls' high schools, village primary schools, vocational schools, normal schools and an engineering college, while the S.M.R. maintains the following :

Approved School Abroad (by the Education Ministry)	
Primary Schools (in S.M.R. Area only)	26
Middle Schools	4
Girls' High Schools	4
Commercial School	1
For Japanese	
Teachers' College, Mukden	1
Girls' Domestic Schools	13
For Chinese	
Primary Schools and Japanese Language Schools	11
Middle School	1
Commercial Schools	2
Agricultural Training Institutes	2
Mining School	1

For Japanese and Chinese

Manchuria Medical College	1
Technical Continuation Schools	6

Free transportation on trains is provided for primary school pupils, both Chinese and Japanese, living at points in the Railway Zone where no schools exist, and in some places dormitories have been established.

Owing to the differences in language, Japanese and Chinese children are usually taught separately in the primary and middle schools, but practically all the more advanced institutions are open to Japanese and Chinese alike. The latter institutions fulfil a specially important mission in that they train young Chinese so that they may carry on medical and sanitation work in Manchuria and Mongolia, and may assist in the technical development of these regions along various lines. While in the beginning it was found very difficult to bring about attendance of Chinese children in the schools, these have been made so attractive that the privilege of attending them is being eagerly sought, with the result that in no part of China has general public education reached the development which has been attained in the territory under Japanese control.

Hospitals And Sanitation—South Manchuria generally is a remarkably healthful region and is free from endemic diseases. Still, considerable work has been done to bring about observation of ordinary measures of sanitation among a primitive population, and strict watch must constantly be kept to prevent introduction of epidemic diseases, especially through the ports. In

connection with this work, in which the S.M.R. takes a prominent part, free vaccinations, inoculations against epidemics whenever necessity arises, analysis of drinking water and meat, medical inspection in factories and mines, and general quarantine work are conducted. Furthermore, all the schools in Japanese jurisdiction are visited regularly by physicians and dentists.

Hospitals are maintained throughout the Leased Territory, the Railway Zone and in some points outside thereof by the Kwantung Government, the Japanese Red Cross, and by the S.M.R., all of these being modern and conducted by qualified physicians and nurses. The S.M.R.'s contribution to this cause consists of 21 hospitals and branch hospitals, most of them located at points along the railway, though some are found in Chinese territory. The number of physicians in the employ of the Company is 206.

The new S.M.R. Hospital in Dairen deserves special mention owing partly to its size and partly to the excellence of its equipment. The portion thereof which has already been completed, and which is now in use, cost Yen 7,199,395, in addition to which Yen 714,670 worth of medical instruments, etc., were purchased, making a total outlay of Yen 7,914,065.

These hospitals look after patients of all nationalities, and, furthermore, the S.M.R. employs public physicians at many points outside the Railway Zone where no hospitals are found.

Cost Of Public Services—From the above it will be seen that a large portion of the earnings of the S.M.R. from its railway operations and its mines are being expended for the public welfare in various undertakings which have no relation to the functions of the Company as an enterprise for profit, but which constitute an important part of its function as a factor in the far larger aims of the Japanese Government, namely, the development of Manchuria, not only along material, but also along cultural lines.

An idea of the amounts spent by the S.M.R. on such services may be gained from the following figures for the fiscal year ending March 31, 1929:—

Hospitals	¥ 2,603,066
Schools	3,182,202
Other Educational Expenditures	108,188
Libraries	302,727
Sanitation	132,863
Central Laboratory	395,733
Agricultural Experimental Stations	349,297
Sanitation Laboratory	193,147
Infectious Animal Diseases	119,627
Afforestation	59,922
Specimen Halls	21,368
Administration	578,942
Local Administration	654,434
Encouragement of Industrial Enterprises	2,987,543
Water	459,328

S. M. R. CO. BALANCE SHEET

(March 31, 1930)

Assets

Subscribed Capital Stock uncalled	¥ 52,844,000.00
Expenditures on Capital Accounts	716,201,517.14
Products	6,686,120.27
Material and Supplies	8,323,454.19
Bonds and Shares	94,226,837.41
Cash in Hand and in Banks	34,156,147.43
Advanced Loans	69,265,704.49
Due from Other Concerns	610,856.42
Collateral Securities, etc.	6,400,718.39
Guarantee Funds	12,770.00
Bills Receivable	7,333,763.22
Exchange Accounts	60,903.63
Miscellaneous Accounts Receivable	54,816,122.67
Partial Payments made in Advance	23,330,441.37
General Work in course of Constructions and Repairs	2,083,686.98
Discount on Bonds	11,084,614.66
TOTAL	¥1,087,437,658.27

Liabilities

Capital Stock Subscribed	¥440,000,000.00
Legal Reserve	22,430,000.00
Special Reserve	145,400,000.00
Reserve for Employees' Retirement Allowances	6,500,000.00
Bonds	277,102,000.00
Due to Other Concerns	1,000,864.96
Collateral Securities, etc.	12,350.00
Guarantee Funds	4,124,777.24
Bills Payable	22,000,000.00
Exchange Accounts	38,376.41
Employees' Savings Deposits	8,226,953.14
Employees' Surety Deposits	36,905,670.18
Employees, Mutual Relief Society Deposits	4,719,509.92
Miscellaneous Accounts Payable	59,322,556.85
Matured Bonds Unpaid	61,600.00
Sundry Receipts Unadjusted	3,892,847.42
Balance brought forward from previous year	10,194,195.11
Net Profit for the year ended March 31, 1930	45,505,857.04
TOTAL	¥1,087,437,658.27

Profit and Loss Account

	Income	Expenditure	Balance
Railroad	¥122,103,742.64	¥39,793,306.43	¥82,310,436.21
Harbors & Wharves	12,276,104.14	7,789,925.79	4,486,178.35
Collieries	84,364,664.58	68,524,127.47	15,840,537.11
Blast Furnaces. (Iron Works)	8,939,705.95	7,726,840.22	1,212,865.73
Local Administration	4,689,833.38	16,757,766.84	12,067,933.46
Interest	7,123,745.34	22,211,347.36	15,087,602.02
General Expenses	—	14,837,811.10	14,837,811.10
Sundries	1,500,266.10	744,061.68	756,204.42
Depreciation & Depletion, etc.	—	17,107,018.20	17,107,018.20
	—	45,505,857.04	45,505,857.04
	¥240,998,602.13	¥240,998,062.13	0
			Loss

Disposition of Net Profit

	Net Profit	Disposition
Net Profit for the year ended March 31, 1930	¥45,505,857.04	—
Balance from Previous Year	10,194,195.11	—
Legal reserve	—	¥ 2,280,000.00
Special reserve	—	10,000,000.00
Reserve for Employees' Retirement allowances	—	2,000,000.00
Dividend on Government Stock (5.3% per annum)	—	11,509,268.00
Dividend on Public Stock (11% per annum)	—	18,700,000.00
Bonuses	—	650,000.00
Balance carried forward	—	10,560,784.15
	¥55,700,052.15	¥55,700,052.15

POINTS OF INTEREST

Port Arthur—is today interesting mainly because of its historic associations, and has decreased much in importance since the days when it was the stronghold of Russian power and had a population of over 42,000. The port is no longer used as a naval base, though the town is the seat of the Kwantung Government, and is also a favorite resort during summer owing to its excellent bathing beaches. The population of the districts is (1929) 127,503, of whom 11,743 are Japanese, 115,567 Chinese, 103 Koreans and 90 foreigners, principally Russians.

Port Arthur and its vicinity contain numerous relics of the great siege which, because of the stubborn fighting and great loss of life, astounded the world. The ruins of many forts may still be seen, the most interesting and easily accessible being the North Fort on East Chikuanshan Hill. The famous 203 Metre Hill, which was the scene of some of the fiercest fighting, is also worth visiting. Among the other points of interest in connection with the siege are the War Museum, where various relics, weapons, and models of the forts may be seen; and the War Monument, a lofty column, 218 feet high, standing on an eminence commanding an excellent view of the town. It was built from the stones which filled the vessels sunk by the Japanese to block the harbor entrance.

The Port Arthur Museum contains an extensive collection of Mongolian, Tibetan and Manchurian articles from ancient periods of the history of these regions,

Chinese Temple, Kirin.

Street Scene, Kirin.

Chinese Town in Fushun.

Scene at Taonen.

Street Scene, Tsitsihar.

Chinese Immigrants Arriving at Dairen.

Chinese Niangniang Fair at Tashihchiao.

Chinese Funeral Service.

Lama Dance, Mukden.

Chinese Funeral at Chinchou.

Scene at Dairen Shrine.

Marshal Chang Hsueh-liang reviewing troops.

including a large number of mummies. Modern hotels are maintained in the city and at the Ogondai beach.

Port Arthur may also be reached by an excellent motor road which, after passing through the famous Hoshigaura beach resort a few miles from Dairen, traverses an interesting and beautiful bit of country, skirting the sea at many points. To students of Chinese affairs this drive affords special interest. It passes through an agricultural region the soil of which is poorer than that found in most other parts of China, and yet the farms and villages, and the villagers themselves, are cleaner, more orderly, and show generally far more signs of prosperity than may be seen elsewhere in China, affording a striking illustration of the measure in which Chinese thrift and industry are capable of developing prosperity if they are only assured of peace and good government.

DAIREN-CHANGCHUN LINE

Chinchou—the ancient walls of which may be seen from the train, was once the administrative center of the Peninsula and is still important. East of the station lies Tahoshan, the highest peak in the region, on the summit of which are several Buddhist and Taoist temples.

Pulantien—two miles south of the Leased Territory boundary, is the center of a salt manufacturing industry, and salt fields, with curious Chinese wind-mill pumps, may be seen here.

Hsiungyaocheng — is famous for its hot springs, about 1⅓ miles from the station. Visitors usually dig holes in the sand of the river shore, into which the hot water bubbles, but indoor baths are available at the hotel, and sea bathing may also be had. The S. M. R. maintains here an experiment station engaged mainly in fruit cultivation. North-east of the station is a conspicuous hill. Chinese legend has it that from the top thereof a mother used to look every day for her absent son, and when she finally died, broken-hearted, the monument was erected there in momory of her devotion.

Kaiping—is noted for its wild silk industry, silk from wild cocoons being made into pongee and other fabrics.

Tashihchiao—is the junction point whence a branch line of the S.M.R. runs to Newchwang, a distance of

14 miles. Near Tashihchiao is the Niang-Niang-Miao shrine, famous for its markets to which thousands of Chinese are attracted on fete days. Women particularly worship at this shrine which is believed to provide good husbands and children. A large magnesite deposit is found near Tashihchiao.

Newchwang (*Yingkou*)—was the first port opened to foreign trade in Manchuria (1860) but its importance has decreased greatly since the development of Dairen. It is, however, still the center of a considerable bean trade, the produce being brought from interior points down the Liao River, whence it is shipped abroad by steamers during the summer, the river being frozen in winter.

Haicheng—contains an eminence supposed to be the remnants of an old Korean fort, and on a low hill outside the South Gate is a Confucian temple commanding a good view of the city and the river.

Tangkangtzu—is a famous hot spring resort with several good hotels, some of which have accommodation for foreign travelers and have excellent baths. A mud bath with curative value for some diseases, was recently provided. Near this town lies the famous Chien-shan mountain region, a wooded range with splendid rugged peaks and gorges amidst which are Buddhist and Taoist temples of quaint architecture, some of which are over a thousand years old. The climb from Tangkangtzu may be made in a day.

Anshan—(See Anshan Iron Works).

Liaoyang—is one of the oldest towns in China and was a Korean castle during the days of Korean domination of the surrounding region, in the first century, the old South Wall, outside the present North Gate, being a relic of such. From 1615 to 1625 this town was the capital of Manchuria. The Pai-ta (White Tower) which may be seen from the train, is at least a thousand years old. The outside walls of the pagoda are covered with carved images of Buddha and his disciples. A temple containing a golden image of Buddha attracts many worshippers.

Mukden (*Fengtien, Liaoning*)—is the capital of the province by that name and is the most important city politically in Manchuria, having been the seat of the famous war-lord, Chang Tso-lin. It was the seat of the Manchu Dynasty from 1664 to 1912. Mukden is divided into three separate sections, the Chinese Walled City, the Japanese Railway Town, and the so-called International Settlement, which is under Chinese jurisdiction but which contains the various consulates, the foreign club, and many foreign residences and business establishments.

The Chinese City proper, two miles from the railway station, is surrounded by a wall 35 feet high and covers an area of ten square miles. The wall is broken by four towered gates outside which stand Lama towers or pagodas. Within the Wall are the old Manchu palace, which is, however, in a poor state of conservation, and various old buildings from the days of the Manchu

regime. While the city is rapidly being modernized, it still preserves in many respects its typically Chinese aspect. The Japanese Railway Town covers 1,500 acres and is built in modern style, with wide streets and various improvements. A large and entirely modern hotel was completed by the S.M.R. in 1929, at a cost of Yen 1,800.00. Pei-ling, a couple of miles from Mukden, and Tung-ling, some distance farther away, are magnificent old Manchu tombs surrounded by ancient woods and are well worth visiting.

Mukden is an important commercial center, furs and skins being among the principal articles of trade, while many foreign firms maintain their main offices there. It may be noticed that Chinese and foreign stores are entering the Japanese Railway Town in increasing numbers.

Tiehling—is an old town of some commercial importance. The walled town is two-thirds of a mile distant from the station and contains the Yuan-tung-tzu temple, built about 890, within the compounds of which stands a thirteen-storied white pagoda, built in 828. A Buddhist temple, Tzu-ching-szu, lies on a hill about one mile from the town.

Kaiyuan—The walled town was built in 1369, and is four miles from the town which has grown up by the station, which is an important produce center, beans and other agricultural products being brought these along the Liao River for manufacture in its oil mils or for shipment abroad.

Changtu—The main town lies about five miles from the station, outside the remnant of the Palisade which was built as a branch of the Great Wall to form a a barrier between Mongolia and Manchuria, Changtu-fu being formerly a part of the Mongolian domain.

Ssupingkai—has become important as the junction point whence starts the railway system runing eastwards to Paiyantala, and in a north-easterly direction to Taonan and Tsitsihar.

Kungchuling—was merely a village until the coming of the railway made it an increasingly important produce center. The S.M.R. maintains an agricultural experiment station at this point. The tomb of the Emperor Tai-tsung (17th century) is three miles north of the station.

Changchun—is the northern terminus of the S.M.R. system and is the junction between this line and the Chinese Eastern Railway line running to Harbin. The Japanese Railway Town is entirely modern, with wide streets, foreign-style buildings, a good hotel, a fine park, golf course, etc. The Chinese town is more modern than is usual with Chinese cities. A Lama temple outside the North Gate is quite famous.

MUKDEN-ANTUNG LINE

The scenery along this line is very beautiful at many points, the track passing through many gorges and along picturesque rivers, Angler's Hill, about twenty miles southeast of Penchihu, being the prettiest spot on the line.

Penchihu—is surrounded by hills containing caves through many of which run subterranean streams. The town is famous for its pottery, and near it are iron and coal deposits operated by a Sino-Japanese corporation.

Feng-Huang-Shan (*Mt. Phoenix*)—may be seen from the station of that name.

Wulungpei—is noted for its mineral springs and has a Japanese hotel with accommodations for foreigners.

Antung—is an important town on the Yalu River and about seven miles from its mouth. It is a center for trade in lumber, the logs being floated down from the virgin forests on the upper branches of the Yalu. The city consists of three sections, New Town, S.M.R. Leased Area, and Old Town, the two former being composed partly of foreign style and partly of Japanese style houses. The Old Town is mainly Chinese. An iron bridge, 3,097 feet long, crosses the Yalu and connects Manchuria with Korea.

CONNECTING LINES

Changchun-Harbin Line—This is of importance in that it forms the connecting link between the S.M.R. and the main line of the Chinese Eastern Railway, which connects, at Manchouli, with the trans-Siberian line and is a section of the through service to Europe.

Harbin—owes its existence entirely to the building of the C.E.R. Before the advent of the Russians, some three decades ago, a small Chinese distillery was the only building found on the site of the present-day populous city. The majority of the inhabitants are Chinese and Russians, the other principal nationalities being represented by 3,823 Japanese, 215 Britishers, 93 Americans, and 192 Germans. Harbin consists of three distinct sections, Pristan, which is practically entirely Russian; New Town, where most of the Government and the C.E.R. administration buildings are found, as well as the consulates; and the Chinese city, Fuchitien, which is well built and, being entirely new, is quite modern. Commercially, Harbin is very important, being the center of the rich area of North Manchuria, the products of which reach the city both by railway and by vessels operating on the Sungari. Harbin is unique in that it presents in many phases the aspect of a Russian town under the old regime, even though it is now under Chinese administration. While it is known for its gaiety, concerts, dancing and theatricals forming a prominent part of the life of the inhabitants, it also presents many tragic pictures of destitution among formerly well-to-do Russians.

A railway running in a northerly direction from Harbin through a rich agricultural region, to Hailun, was recently constructed by the Chinese and has proved to be a useful venture.

Ssupingkai - Chengchiatun - Paiyantala - Taonan - Tsitsihar - Lines—These lines were constructed by the S.M.R. for the Chinese and are under Chinese management. They are proving of great importance in that they have made possible the penetration of agriculture and commerce into a region which was heretofore practically undeveloped. This vast country was formerly part of Mongolia, and parts thereof still belong to Mongolian princes. Until very recently the inhabitants were Mongol nomads, who roamed over it with their herds and by whom agriculture was carried on only incidentally and on a very small scale sufficient to meet only their own needs. The fertile lands proved, however, a great attraction to the Chinese who began to settle there, converting the pastures into tilled fields, in which they were encouraged by the Manchurian government which entered into arrangements with the Mongolian princes for the furthering of this development. Most of the nomad inhabitants wandered with their flocks further westwards, while some became agriculturists. The latter have adopted the Chinese manner of living and dress, and, especially since the advent of the railways facilitated this movement, this region is gradually being changed from Mongolia into Manchuria, and while large sections thereof remain nominally Mongolian, it is now practically Chinese.

Ssupingkai - Chengchiatun - Paiyantala — A train service connects these points. Chengchiatun is a fairly large and quite important Chinese town. A good Japanese hotel is found here which is capable of entertaining foreigners. The line to Paiyantala is a branch necessitating a change of trains at Chengchiatun. As no suitable hotel accommodation is available at Paiyantala, the trip should, if possible, be made in one day, which is quite feasible. Paiyantala is a fairly large and rather scattered town of rather primitive construction, located in the midst of a very rich agricultural region. A recently completed Chinese line runs in a southerly direction from Paiyantala to Tahushan, a point on the Peking-Mukden railway line.

Chengchiatun-Taonan-Tsitsihar—Taonan is a large Chinese town, surrounded by a mud wall. The line between Taonan and Tsitsihar Station (Anganchi) was completed during the latter part of 1926, and since then the Chinese have built a broad-gauge line to the city of Tsitsihar, crossing the C.E.R. tracks. They are now building a line to Koshan, a town to the north-east of Tsitsihar, of which about 128 kilometers has been completed and is now being operated. Another line is now being built by the Chinese from Tao-an, a point slightly north of Taonan, to Solun, which lies north-west thereof.

Travel over all these lines offers interest principally to the serious student of Far Eastern matters. There is little to attract the tourist, the land being almost universally flat. Between Taonan and the Nonni River,

which the railway crosses, a Lama monastery may be seen from the train, but this is virtually the only remaining evidence of Mongolian life. It is interesting to note, however, the astounding rapidity with which Chinese immigrants penetrate into and develop these regions, as most of them are very fertile. Some parts are less favorable owing to the presence of alkali, but the S.M.R. Experiment Station at Kungchuling is conducting experiments for the purpose of devising methods by which use may be made of such lands.

The railway from Taonan runs to a point near Anganchi, a town on the C.E.R. line at which is the so-called Tsitsihar station, although the real city of Tsitsihar is about eighteen miles north thereof. Tsitsihar is a typically Chinese city and is the capital of the Heilungkiang (Amur) Province. It has a small Confucian temple, but has other-wise no show places of interest.

Changchun-Kirin-Line—This line was built for the Chinese by the S.M.R. and is being managed by this company though the ownership is Chinese. It passes through a fertile country to Kirin, the capital of the Province by that name. This town is very beautifully located on the Sungari, which at this point winds picturesquely among surrounding mountain ranges. On an eminence a short distance from the station is a group of temples, which have recently been restored, and whence a magnificent view may be had of the city and the surrounding country. Across the river is an ancient and very picturesque temple wonderfully located near the top of a forest-covered ridge, while a deep mountain pool at

the foot of the temple steps is probably one of the most picturesque spots in Manchuria. The trip from Changchun to Kirin and back may be made in a day, this providing sufficient time to inspect this interesting city, though it is hardly sufficient to allow inspection of the temple across the river.

Kirin-Tunhua Line—This line was completed in the Fall of 1928, having been built for the Chinese by the S.M.R. with Japanese funds. As it traverses mountainous and wood covered territory, it provides greater scenic attraction than does any other line in Manchuria.

Mukden-Hailungcheng Line—This line was built by the Chinese and with Chinese funds, being completed in 1927. The original construction was found to be too light, and it is now being improved by the building of concrete bridges and culverts.

Kirin-Hailungcheng Line—In 1929 the Kirin authorities completed a line from Kirin to Chaoyang, where it connects with the Mukden-Hailungcheng Line. This line has been fairly well built and possesses some new, modern American rolling stock.

Peking-Mukden Line—The Peking-Mukden Line runs from Mukden through Manchurian territory as far as Shanhaikwan, whence it continues on to Tientsin and Peking.

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